

Summary Minutes of the  
**STATE ENVIRONMENTAL COMMISSION (SEC)**

Meeting of June 17, 2008

Las Vegas Convention and Visitors Authority Board Room,  
3150 Paradise Road, Las Vegas, Nevada

**Members Present:**

Lewis Dodgion, Chairman  
Alan Coyner, Vice Chairman  
(Eugene) Jim Gans  
Ira Rackley  
Tracy Taylor  
Harry Shull  
Stephanne Zimmerman

**Members Absent:**

Kenneth Mayer  
Tony Lesperance  
Pete Anderson  
M. Frances Barron

**SEC Staff Present:**

Rose Marie Reynolds, Dep. A.G.  
John Walker, Executive Secretary  
Robert Pearson, Recording Sec.

**BEGIN SUMMARY MINUTES**

Chairman Dodgion called the meeting to order at 10:15 am and noted that the meeting had been properly noticed and that a quorum was present.

He then moved down the agenda to:

**1) Approval of minutes 03/18/08 SEC hearing \* Action Item**

There were no additions or corrections to the minutes of the March 18 hearing.

**Motion:** Commissioner Coyner moved to approve the minutes of the March 18 hearing, was seconded by Commissioner Shull and the vote was unanimous in favor.

Chairman Dodgion now moved down the agenda to:

**2) Settlement Agreements, Air Quality Violations \*Action, Consent Calendar**

Company Name

1. American AVK Company
2. Humboldt Vega, LLC
3. Service Rock Products

Mr. Greg Remer of the NDEP Bureau of air Pollution Control presented the proposed settlement agreements to the Commission.

(The table of agreements and penalties, with comments, is contained in Appendix 1)

Commissioner Gans noted that one of the violators had been previously cited as far back as 1998 and asked for Mr. Remer's take on the fact that there were repeated violations, and if the problem was ignorance, or something else? Mr. Remer said it might partially be ignorance; he wouldn't go so far as to say to say it was malicious or willful, but the repetition might lead in that direction.

Commissioner Coyner noted that there had sometimes been 10 or more of these settlements at previous meetings, this time there were three; he wondered if compliance was up, inspection down, or other reasons? Mr. Remer replied that the three penalties were primarily based on the workload of compliance staff at this time. The mercury control program and lots of source test reviews have taken a lot of staff attention, but the Division still has a strong field presence and the action on some settlement items has not been completed yet, but Commission will be seeing those in the near future.

**Motion:** Commissioner Coyner moved to approve the settlement agreements, the motion was seconded by Mr. Shull, and the vote was unanimous in favor.

Chairman Dodgion now moved down the agenda to:

## **Regulatory Petitions -- \*Action Items**

### **Water Quality Planning:**

#### **3) Regulation R160-06: Proposed Changes to Water Quality Standards**

Kathy Sertic, Bureau Chief of NDEP Water Quality Planning, noted that there were two petitions to be presented and said that they fulfilled components of the Bureau's long-range plan, and she would therefore first give a brief overview of the proposed regulations and of actions to come.

**(Begin prepared remarks by Ms. Sertic)**

Good Morning Mr. Chairman and Members of the Commission.

For the record, I am Kathy Sertic, Bureau Chief of Water Quality Planning.

My staff and I are here to present for your consideration, proposed revisions to the water quality standard regulations.

The two petitions before you today fulfill components of the Bureau of Water Quality Planning's (BWQP) Long Range Plan (Plan). So before we get into the

detailed information on the proposed revisions, I would like to give you a brief overview of the Plan and a preview of upcoming actions.

We first developed the Plan in 2004 to integrate the BWQP's programs of Water Quality Monitoring, Water Quality Standards, Total Maximum Daily Loads (TMDLs), Nonpoint Source Pollution Management and Public Education. The Plan is being implemented on a targeted watershed basis that enables us to maximize program efficiency and effectiveness. It is intended to be a living document that will be revised and updated as needed to meet changing issues, priorities and funding. Throughout the development and implementation of the Plan, we have and will continue to consult with a wide variety of other agencies including the Nevada Department of Wildlife, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Bureau of Land Management, Natural Resources Conservation Service, cities, counties, conservation districts, water supply purveyors and others.

One of the overarching goals of the Plan and the focus of the petitions before you today is to improve Nevada's water quality standards through more appropriate beneficial use assignments and the development of more appropriate numeric criteria to protect those uses. Water quality standards are the foundation upon which discharge permits, TMDLs and watershed management plans are built, so it is imperative that the standards are suitable and protective of site-specific conditions. Most of the existing water quality standards were adopted more than 25 years ago and include broad categories of beneficial uses and national numeric criteria developed by the U.S. Environmental Protection Agency. Over the past several years we have come to recognize that these water quality standards may not be appropriate for specific waterbodies in Nevada given geology, land use, flow alterations and other site specific watershed conditions. As outlined in the Plan, we intend to systematically evaluate waters on a case by case basis and wherever possible and appropriate set site specific standards.

As you will hear today, our efforts over the past several years have centered on the Muddy River Basin. We are also wrapping up targeted monitoring of wadeable streams in the Snake River Basin and central Nevada with the goal of developing site specific standards for these waterbodies and you can expect to see these petitions within the next couple years. The Upper Humboldt River Basin is our current focus watershed and this summer we are launching an intensive monitoring program on wadeable streams in that area. We are also developing state specific molybdenum criteria for the protection of aquatic life based on the most recent toxicity studies applicable to species found in waterbodies throughout Nevada, and intend to present these to you in Fall 2008.

John Heggeness will present the first petition today which is a reorganization of the Class Waters water quality standards. We are proposing to effectively dismantle the Class Waters format and establish separate water quality standard tables for each individual waterbody. We believe this is a logical and necessary step for implementing the Long Range Plan and will enable us to examine each of the waters on a case by case basis and develop appropriate and site specific standards. A relevant example is Bowman Reservoir, named as a Class C water under the current structure. If you approve the reorganization, Bowman Reservoir stands alone and its water quality standards can be modified with site specific standards based on the quality of its source water, the Muddy River.

Paul Comba will present the second petition of proposed revisions to the Muddy River water quality standards. These include site specific temperature criteria based on the fish species found in the river and site specific fluoride and boron criteria based on natural conditions and refined beneficial uses. I would like to acknowledge NDOW, the U.S. Fish and Wildlife Service, Southern Nevada Water Authority and EPA for assistance in the development of these site specific standards

This concludes my introductory remarks. I would be happy to answer any questions you may have now or at any time during John or Paul's presentations.

**(End of prepared remarks)**

Chairman Dodgion asked where the term "wadeable" had come from? Ms. Sertic replied that it was a term coined by US EPA and it just meant small streams versus the larger rivers. Chairman Dodgion asked if the term expands the EPA's jurisdiction? Ms. Sertic replied, not in the context that it was being used here, they just meant it to apply to the smaller streams.

Chairman Dodgion asked if by expanding the way the Bureau was going to do water quality standards, class waters, beneficial uses, etc., was going to require additional monitoring and planning staff? Ms. Sertic said that this was why the Bureau was going to focus their attention on a "watershed basis" to intensely monitor (for example) the Upper Humboldt for the next couple of years, and then probably moving downstream. Chairman Dodgion asked if this was a move to consolidate and Ms. Sertic said she agreed it was, but the long-range plan also intended to protect waters that currently don't have standards, and they are also looking at beneficial uses and attempting to more appropriately assign those uses based on consultation with other agencies and local users.

Commissioner Gans asked if going from general standards to a site-specific approach was a model that the EPA encouraged or something the State decided it was time to do? Ms. Sertic said that they had decided that some standards

were not appropriate because they did not address specific conditions on a water body; when they looked at the “303” list which has hundreds of water bodies on it, it popped out that some of the standards may not be appropriate. Specific conditions need to be addressed. So it was a State priority, not driven by EPA. Commissioner Gans followed up by asking about other states that might be doing the same thing, and noting that it could be a lot more work; Ms. Sertic said that they understood the work involved and that was the reason for putting it on a watershed basis. For the next five-year plan they would be entirely in the Humboldt River Basin. It is a long process, but they felt it was the most appropriate way to go.

When there were no more questions for Ms. Sertic she introduced John Heggeness of the NDEP Bureau of Water Quality Planning who would present **Regulation R160-06**.

Mr. Heggeness presented the regulation via a Power Point presentation, which is contained in **Appendix 2**).

When Mr. Heggeness completed the first part of his presentation on the background of the site-specific approach he asked if there were questions, and Commissioner Zimmerman asked about determining standards for water bodies that the Bureau might not know exist—were there some default provisions? Mr. Heggeness said there was a “tributary rule” that would apply the same standard “all the way up (or down)” that applies to the water body with standards. Commissioner Zimmerman wondered if that covered any situation that might come up down the road, was it possible for there to be a body of water out there with no standards? Mr. Heggeness replied that yes, it was possible. There are some closed basins that are not a tributary to any other water body. The Bureau is seeking information from stakeholders on any water bodies of concern. Commissioner Zimmerman asked if the State considered having some default standard, and Mr. Heggeness said they did consider it, but there are some issues and difficulties with that, however they may still eventually set up such a system, though it was probably still a few years away.

Ms. Sertic added that they will be looking at these water bodies during their targeted watershed effort and talking with local stakeholders. But she clarified that there are “free from” standards that do cover all water bodies in the state.

Chairman Dodgion asked about the change in the beneficial uses, specifically in domestic use, where the “qualifiers” requiring some treatment have been removed—does this in effect tighten standards, because the water must now meet requirements before treatment? Mr. Heggeness said yes, the Bureau felt that it was best to do the standards within the individual tables, if filtration was to be required, rather than do something that would apply to all waters of that class. Chairman Dodgion asked for some additional clarification—Tom

Porta, Deputy Administrator for NDEP came forward to note that the modifiers were already contained in the municipal domestic supply standards and they must be met "with conventional treatment," and that these regulations did not change that provision. And he believed that qualifier is continued when these waters are moved over to designated status. Chairman Dodgion said that he would like to have that citation so he could be absolutely clear; Mr. Porta said they would get that citation back to the Commission during the presentation.

Commissioner Gans asked about the impacts of making the standards more site-specific and adding E. coli and ammonia standards; would the result be more treatment required? Mr. Heggeness said that it may in some cases require more, but it may in some require less, because if there are natural conditions such as arsenic levels, the site-specific standard could take these natural conditions in to account. In response to a follow-up he added that they do consider how these natural conditions affect beneficial use.

Commissioner Zimmerman noted that the reformatting allows the agency to focus on the risk of the use and be specific to the users rather than a general standard, although it looks like it will be more work for staff. Commissioner Gans also said he supported the approach but thought it would take more staff and resources to do this kind of monitoring.

When there were no further questions Mr. Heggeness continued with the second part of his presentation, on reformatting water quality standards tables and further details of the proposed regulation changes (continuing with the presentation in **Appendix 2**).

Commissioner Coyner asked about moving control points and Mr. Heggeness clarified that control points would be at the bottom of the reach, standards apply to the whole reach but control points may move in certain cases. He gave some examples in his presentation of beneficial uses charts and how the changes made it easier to find standards for a given body.

Commissioner Coyner asked about the new numbering system, that is, the bodies are numbered by section in the regulations continuing consecutively in the next section, and wondered what happened if a water body needed to be added, since there were no available numbers for it. Commissioner Coyner suggested that section could be designated with a letter and then numbered (e.g. "A-17") allowing for expansion. Mr. Heggeness said they planned to work with LCB on a solution. Commissioner Coyner also asked about "pit lakes" and Mr. Heggeness clarified that pit lakes were not under these regulations but some could be in the future. Commissioner Gans asked about finding specific water bodies in the large number of pages in the regulations and Mr. Heggeness said that in the index or in the future on the website you would be able to key in the name and find it. But the final tables have to wait for final NAC

citations to be made up. They will strive to make it easy for people to find what they're looking for.

Commissioner Coyner asked if every one of the 280 water bodies would have a beneficial use and Mr. Heggeness said "yes." Commissioner Coyner pointed out that on pp. 245 and 247 that Bronco and Gray Creeks did not have a listed beneficial use, and Mr. Heggeness said that they were working on those and one additional (Smoke Creek) beneficial use designation but it was not practical to try to push those in to these regulations.

Ms. Sertic now came forward to address Chairman Dodgion's earlier question about removing the qualifiers for the municipal and domestic supply. She said NAC 445A.122 sub-paragraph (f) addresses municipal and domestic supply and states that "waters must be capable of being treated by conventional methods of water treatment," in order to comply with standards and these regulations are not being changed in the item before the commission, and so these qualifiers will remain in effect. Ms. Sertic also addressed Commissioner Gans' question about the resources needed to oversee these standards; she stated that the targeted watershed approach gives the Bureau the opportunity to more efficiently address site-specific issues, for example if there is a proposed discharge on one water, since the water body stands alone it is a more effective and efficient way to manage the oversight.

Commissioner Coyner asked how many out of the 280 water bodies are there already data for? Mr. Heggeness estimated there is data for about half the water bodies based on samples taken over the last 30 years, some of which do not include all of the 20-30 parameters normally measured. He added that the basin approach would be helpful for gradually filling in the data. In response to a follow-up he stated that the standards in this regulation are "already there" as driven by the beneficial use standard. But for the unsampled water bodies he agreed we don't know if they're technically impaired until sampling is done.

Ms. Sertic added that all of the available water quality data is posted on the Bureau website.

Chairman Dodgion called for any public comment; there being none, he asked for a motion.

Commissioner Gans complimented the Bureau on their work on this regulation.

**Motion:** Commissioner Gans moved to approve the Regulation R160-06 as presented. The motion was seconded by Commissioner Zimmerman, and the vote was unanimous in favor.

Chairman Dodgion now moved down the agenda to:

#### 4) Regulation R083-08: Muddy River Water Quality:

Paul Comba of the NDEP Bureau of Water Quality Planning presented the regulation to the Commission. (The Power Point that was the basis of his presentation is contained in **Appendix 3**).

At the conclusion of the presentation Commissioner Gans asked about the possible effects of the Moapa Indian Reservation on the upper reach of the river. Mr. Comba said that if they set water quality criteria that were more strict than the State's it could have an effect, but the State has worked with the Moapa Valley group and exchanged information, he felt there had been no conflicts previously. Chairman Dodgion noted that the water quality standards set below the Reservation by the State are enforceable on the waters in the Reservation by US EPA. Mr. Comba noted that EPA is trying to encourage the tribal governments to develop their own standards program.

Commissioner Gans followed up asking about the possible use of Muddy River water by the Southern Nevada Water Authority. Mr. Comba noted that SNWA was in agreement with the standards proposed here.

Commissioner Gans also was interested the use of the river water by the Reid-Gardner Power plant. Ms. Christine Peller of Nevada Power Company came forward to note the plant did not discharge into the river—the river water is used for cooling at the plant but after use is held in ponds and evaporated off.

Chairman Dodgion asked if there were not separate specific Total Dissolved Solids (TDS) standards for the Muddy River, if they are the same as the Hoover Dam control point? Mr. Comba replied that TDS for the Muddy River is footnoted in the regulations on the Colorado River System, and the applicable control point for the Muddy is the one below Hoover Dam (723 mg/l).

Commissioner Gans noted his appreciation of the five-page executive summary that had been provided by NDEP staff.

Commissioner Coyner asked about any regulatory hurdles in dealing with the renumbering as noted in discussing the regulation in the previous agenda item. Mr. Comba said it would just be a procedural issue working with LCB.

When there were no further questions Chairman Dodgion opened the floor to public comment. Christine Peller of Nevada Power came forward to express the companies "slight concern" about the exclusion of the tribal lands—the power company shares the border of the upper reach with them and she stated that there is an unlined pond upstream on tribal lands. She wondered if NDEP had a method for determining what the tribe might be bring into the river versus other users.

Mr. Comba said he did not know exactly how to respond to that; Mr. Porta of NDEP came forward to note that each tribe has the ability to set their own water quality standards, and NDEP will monitor waters on tribal lands if asked to, but must have positive permission from the tribe. Chairman Dodgion said in this specific case monitoring will show any impacts in the reach below the reservation, and if impacts are shown then NDEP will go to EPA and request their intervention and assistance; a permit might be required. Commissioner Gans asked what Nevada Power's specific concern was, and Ms. Peller said the company has asked several times what is in the pond, but having received no response they don't know what could possibly leach into the river. The pond is quite near the river. In response to Commissioner Gans follow up, she said they had noted no deleterious effects, but wanted to make sure they were not caught up in any possible effects.

**Motion:** Commissioner Rackley moved to approve R083-08, with a correction of a typographical error as noted by Mr. Comba; that in section 14 the fluoride number needed to be changed from 2.6 to 3.6. Commissioner Shull seconded, and the vote was unanimous in favor.

The meeting adjourned for lunch and reconvened at 1:00 pm.

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After calling the meeting back to order, Chairman Dodgion moved down the agenda to:

**5) Regulation R194-07: Proposed On-Site Sewage Disposal System**

Mr. Allen Tinney of NDEP's Bureau of Water Pollution Control presented the regulation to the Commission.

**(Begin prepared remarks by Mr. Tinney)**

Mister Chairman, members of the Commission, my name is Alan Tinney, Supervisor of the Permits Branch, Bureau of Water Pollution Control. Our agency is respectfully requesting that you adopt the Proposed Regulations for On-Site Sewage Disposal Systems (OSDS).

Promulgating the regulations became necessary due to transfer of authority for OSDS from the Nevada State Health Division to the NDEP. Currently, NDEP does not have regulations addressing OSDS and must rely on Health Division regulations that are intended for residential use. Further, statutory change to NRS 444.650 limited Health Districts to permitting residential sewage disposal systems only. NDEP has added language in the proposed OSDS regulations to delegate authority back to the Districts to permit commercial OSDS activity.

On July 14, 2007, NDEP began conducting workshops and public meeting to gather input for the proposed OSDS regulations. Informal meetings were held with Washoe and Clark County Health Departments, as well as Humboldt, Elko and Nye county officials. Public workshops were held in Elko, Pahrump and Carson City. Meetings were conducted with the Nevada Association of Counties staff, and written comments were received from Lyon County, Jensen Precast and Orenco Systems. Further, after the Legislative Council Bureau reviewed and returned the proposed regulations, we held two additional public workshops in Winnemucca and Carson City. Comments from all public workshops, meetings and written submittals are available for your review.

The purpose of these regulations is to prevent groundwater contamination by proper design, review, installation, operation and maintenance of commercial OSDS. The regulations recognize changes in technology and provide NDEP the authority to allow new treatment and disposal methods without a lengthy variance process. They also establish nitrogen management and nitrogen restricted areas. Further, there is no fee increase and impact to small business should be minimal, if at all.

After industrial waste, septic tanks and leach field applications are the second leading cause of groundwater pollution in America. The Nevada Division of Environmental Protection has recognized this threat and has taken a proactive approach, which, in part includes promulgation of these regulations. This threat to groundwater has also prompted the U.S. Environmental Protection Agency (EPA) to regulate certain large On-site Sewage Disposal Systems under the Class V well section, in the Underground Injection Control Program (UIC) (40 CFR 144.81) Currently, this is limited to systems that receive industrial waste or serve 20 or more people per day.

NDEP is the delegated agency for the UIC program in Nevada. EPA currently allows the states to determine the flow estimates from 20 people. DEP has exercised its flexibility and set that flow at 3,000 gallons per day for the purposes of these regulations. By doing so, On-site Sewage Disposal Systems 3,000 gallons per day or less will be exempted from future requirement by EPA. This protects many small businesses from potential regulatory burdens. NDEP estimates that about 95% of the OSDS will fit into this category.

We would like to stress that NDEP has not consulted with, nor asked for permission from the US EPA on the proposed regulations. We have drafted the regulations to fit the unique circumstances in Nevada, and do not feel we need their involvement in this issue, as the Commission has adequate authority to adopt a state program.

The division's authority to be lead agency for these regulations comes from NRS 445A.720, which states, "The Department has the final authority in the administration of water pollution prevention, abatement and control. No other

department or agency of the State and no municipal corporation, county or other political subdivision having jurisdiction over water pollution prevention, abatement and control may permit, under authority of such jurisdiction, the discharges of wastes into the waters of the State which would result in the pollution of any of such waters in excess of any water quality standard promulgated by the Commission."

Please note that a minor modification to the proposed regulations was necessary in order to better address connection to sewage requirements. Section 57, subsection (d) on page 23 of the regulations was modified to delete "*at the property line of the proposed system*". This is necessary to allow the pertinent local authorities to specifically define when the sewage lines are "available" within a given service area.

### Highlights of the proposed regulations include:

- **General Permit system for regulating OSDS.**
  - Streamlines the permit process, reducing costs and administrative delays to the owner.
  - Individual permits are still available for variances granted and other special cases.
- **Nitrogen Management Areas.**
  - These areas already exist in the division's Geographic Information System used for subdivision reviews.
- **Moratorium Areas.**
  - Identifies areas of impacted groundwater.
  - Process will eliminate any surprise to the local planning agency and developers.
- **Minimum land area requirements.**
  - Previous Health regulations allowed an application rate of 1,980 gallons per acre.
  - The proposed change is 1,000 gallons per acre.
  - This is consistent with current Health Division residential regulations.
- **Use of soil classification studies to effluent application rates.**
  - Percolation rates have been recognized as a poor technology for determining soil absorption capacity.
  - Soil classification method are a better indicator of soil capacity.
  - Less time is spent by the person performing the test.
  - Test pit doesn't have to stay open overnight; reducing costs and liability.
- **Use of Long Term Acceptance Rate (LTAR) for sizing disposal areas.**

- LTAR rates based on soil type have been incorporated into the regulations.
- LTAR take into account the restrictive nature of the bio-mat formed at the bottom and sides of the absorption trench or bed.
- Once equilibrium is reached, effluent disposal is governed by a steady-state absorption rate.
- **Establishing a limit for nitrogen removal units.**
  - These units will only be required in established Nitrogen Management Areas.
  - Most nitrogen reduction systems have the technology to reduce total nitrogen to 20 mg/l.
  - This technology based standard is reasonable and does not prohibit use of these systems.
- **Requiring a “Certificate of Completion” by the design engineer.**
  - A permit may not be issued until this certificate is submitted and approved.
  - This places the burden of ensuring the OSDS was properly constructed squarely on the design engineer.
- **Establishing a mounding study, if necessary.**
  - This would be necessary in areas of high groundwater or where the hydraulic load rate may be high (i.e. reduction in field size).
  - Provides guidance on how to address areas of shallow groundwater.
  - Prevents premature failure of disposal area due to immersion/anaerobic conditions.
- **The new regulations provide design flexibility.**
  - The Division may grant variances or exemptions on a case by case basis.
  - Allows the staff engineer to determine if new technology, new construction techniques, etc. are acceptable without a lengthy variance process that could hinder or delay the project.
  - Requires the design engineer to ensure proposed changes are equivalent to standard technology.
- **Increasing the minimum septic tank size.**
  - Septic tank sizing in the past was performed utilizing the Uniform Plumbing Code.
  - This guidance is acceptable for tanks up to about 5,000 gallons. Beyond those flows, it creates sub sized tanks with inadequate sludge storage.
  - Proposed regulations provide for sludge storage. This prevents premature failure from solids getting into the leach line.
- **Providing for holding tanks in special situations.**

- Sets minimum performance standards for holding tanks.
- Holding tanks are used by the U.S. Forest Service, State Parks, county fairgrounds, minerals exploration companies, etc.
- **Requiring an Operations & Maintenance Manual.**
  - The design engineer develops this document to aid the owner and/or operator in ensuring the OSDS is running properly.
- **Allowing the District Health Departments and other qualified authorities to regulate On-site Sewage Disposal Systems in their jurisdiction.**
  - NDEP's intent is to allow existing and new agencies throughout Nevada to continue administering their programs.

All permit fees are identical to past applications.

- All permit fees for each category will be the same as before.
- There will be no impact to small businesses as a result of these regulations.
- New OSDS systems will have a maximum size of 15,000 gallons.
- Existing OSDS systems over 15,000 gallons will continue to be permitted.

The Bureau is also drafting a companion "Guidance Manual" intended to assist small businesses and their design engineer in complying with the proposed regulations. When finished, it will be posted on the agency website for public use.

I would like to point out that during all our workshops, we received positive comments from governmental entities, consulting engineers and the private sector. We believe we have put together regulations that are broad in their scope, yet flexible enough to protect health and environment, while promoting the economy.

At this time, I would be happy to answer any questions you may have regarding the proposed regulations.

**(End of prepared remarks)**

(During the presentation Chairman Dodgion had a question about the Health Division's regulations on OSDS; do they allow OSDS on a quarter of an acre? Mr. Tinney said it is now one acre with a well, one-half acre without a well. Mr. Tinney said that most counties were increasing it in their own ordinances. Chairman Dodgion stated that was a good thing.)

At the conclusion of Mr. Tinney's presentation, Commissioner Gans asked him about the MOU with the counties and the degree of supervision of counties under these MOUs. Mr. Tinney replied that the exact degree of supervision would be contained in the language of the MOU; if they get above the 3,000

gallon mark they will have to do some kind of inventory and report that to NDEP on a yearly basis. Also, all the counties that are going to take the program themselves have expressed intent to have their own regulations be stricter than the minimums expressed in these regulations.

Commissioner Coyner asked if this regulation applied only to human sewage, which Mr. Tinney confirmed; in response to a follow up he clarified that the definition of "available" public sewer systems had been found to vary in different counties and that the Division would post the information by county, and if a county declared availability NDEP would not issue a septic permit until the applicant showed a service district declaration of unavailability. The county will retain the decision.

Chairman Dodgion asked if the property line standard for availability disagreed with the uniform plumbing code (400 feet). Mr. Tinney thought it was 200 feet, but Clark uses 300 and Washoe 400 to define "available." He said the property line was the Health Division standard because of equity issues with people hooking up to lines others had paid for.

Commissioner Coyner asked how many systems might be over 3,000 gallons—Mr. Tinney estimated 250. Mr. Gans asked about projections for numbers of these (permitted) systems in the future; Mr. Tinney thought it would be going down, because more communities are extending sewer systems and setting up small treatment plants.

When there were no further questions from the Commission, the Chairman asked for public comment.

Christine Peller of Nevada Power asked if their two large (5,000 gallon tanks) would be "grandfathered" in, and it was confirmed that they would.

When there was no further public comment, Chairman Dodgion said he would entertain a motion.

**Motion:** Commissioner Gans moved to adopt R194-07, and was seconded by Commissioner Rackley. Commissioner Gans noted his motion was to approve the modified regulation as presented—on p. 23, 57 (d) strike the words " at the property line of the proposed system" (the modified page is contained in **Appendix 4**). The vote was unanimous in favor.

Chairman Dodgion now moved down the agenda to:

**6) Regulation R076-08: Adopt By Reference Air Pollution / Air Quality Regulations:**

The regulation was presented to the Commission by Greg Remer, Chief of NDEP's Bureau of Air Pollution Control.

**(Begin prepared remarks by Greg Remer)**

Mr. Chairman, members of the Commission, for the record, my name is Greg Remer. I'm the Chief of the Bureau of Air Pollution Control. As you know, periodically we propose to update our adoption by reference section of the Nevada Administrative Code to be consistent with the latest versions of the federal air quality requirements. LCB File Number R076-08 consists of three Sections that we are requesting to amend in order to bring these updated federal requirements into the Administrative Code. If I may Mr. Chairman, I'd like to ask to have the Commission look at the agency handout, identified as Exhibit 1 that we've provided, as we've determined that we need to forego adopting a couple of the updates and bring those back to the Commission at a later date. The language in the handout is identical to that contained in your packets, except that proposed agency changes are shown in green. I'll describe these changes in more detail as we go through the amendments. Also included in each of your binders is an informational guide that is intended to provide you with more detailed background on each of the specific subparts, so I won't go into the detail of the individual provisions, unless there are questions.

I think if I begin with Section 2 which is the actual adoption by reference section, the changes we are proposing in Sections 1 and 3 will make more sense. So starting with Section 2, which begins on page 2, it shows NAC 445B.221 as the adoption by reference provision within the air regulations. The Section 2 amendments really boil down into four groups of changes. First, we are proposing to include two new sets of standards for internal combustion engines. Those are 40 CFR Part 60 Subpart Quad J and 40 CFR Part 63 Subpart Quad Z which are shown near the top of page 3 and about three quarters of the way down on page 4. I'll talk about these two sections a little more in a minute as we are proposing to permit these engines under our Class III permit program.

The next group that we are proposing to incorporate are hazardous air pollutant or HAP provisions contained in 40 CFR Part 63, Subparts Penta W, Y, and Z. These are new HAP requirements for Hospital Ethylene Oxide Sterilizers, Electric Arc Furnaces in Steelmaking Facilities, and Iron and Steel Foundry's. These are shown at the top of page 4.

The next part of Section 2 is where we reach the Subparts that we would like to forgo adoption until a later date. On Page 4, the three Subparts shown in green strikeout are ones that we'd propose to hold off on adopting. Subparts Hexa B (that's 6 B's) and Hexa C are new standards for Gasoline Bulk Terminals and Gasoline Dispensing Facilities or gas stations. We'd like to hold off on

these because we think we need to develop a new type of permitting process that is better suited to this type of industry. Given a cursory review of the provisions, we think that our existing permits may be too complex and perhaps too expensive in comparison to these new requirements as we understand them today. Likewise, we would like to propose to hold off on adopting Subpart Hexa H for the same reasons. Hexa H targets paint stripping and surface coating facilities such as automotive refinishing processes that our current permits were never designed to accommodate.

I'd also like to mention Subparts Penta L to Q as they are new hazardous air pollutant provisions for a variety of industrial sources including Chemical Manufacturing and Wood Preserving of which we currently do have permits for. These new requirements will be brought into each facilities permit at the first reopening or upon renewal.

The balance of the provisions are either ones that apply to industry that we don't currently have but could reasonably expect to see locate in the State or are corrections and clarifications to existing regulations.

So to be clear on Section 2, we are asking the Commission to not adopt 40 CFR Part 63, Subparts Hexa B, C, and H. All of the other subparts we are recommending adoption.

Going back to Section 1 on page 1, I mentioned the new adoption by reference provisions that apply to internal combustion engines. These are not provisions that apply to motor vehicle engines, rather these are engines that meet our stationary source definition. To permit these engines, we are proposing to do so under our Class III permitting program. We believe that this is a good fit as we already permit several I/C engines under this program. Therefore, we are proposing to expand the exceptions of NAC 445B.038 so that Subpart Quad J and Z engines can fit within the Class III permit program.

Lastly, in Section 3, we are simply updating our reference to the SIC Manual as the version referred to in the adoption by reference provision.

As always, the amendments were work shopped. The workshop for this proposal was conducted in Carson City on May 6<sup>th</sup> and no negative comments were received. With that, the Division recommends that Petition R076-08 be adopted with the deletions that have been proposed.

I'd be happy to answer any questions you may have.

**(End of prepared remarks)**

Commissioner Gans asked about the workshops and noted that there hadn't been a workshop in Southern Nevada and asked if that was because there were

few regulated entities there? Mr. Remer agreed, saying that in Clark Co. only large power plants would be state-regulated.

Commissioner Coyner asked how many Class III sources there were? Mr. Remer said roughly 100, some with generators and some not. The generators that are now subject to federal rules were put under Class III permits in these regulations. Mr. Remer said in response to Commissioner Coyner's follow-up that examples could be industrial processes and possibly farm equipment. Commissioner Coyner also asked if by using multiple engines below the 750-horsepower threshold the users could get around the regulations. Mr. Remer said that the smaller engines still need a permit. Mr. Remer said that theoretically even very small engines might need a permit, whether that was EPS's intent or not.

There was no public comment.

**Motion:** Commissioner Zimmerman moved to approve proposed regulation R076-08 as presented with revisions dated June 17, 2008. Commissioner Gans seconded, and the vote was unanimous in favor.

Chairman Dodgion now moved down the agenda to:

## **7) Administrator's Briefing to the Commission**

Administrator Leo Drozdoff of NDEP thanked Commissioner Gans and the Las Vegas Convention and Visitors Authority for hosting the meeting.

He covered the following topics:

### Budget

He said that the State budget outlook was "bleak," with agencies departments experiencing 4.5 percent cut from the FY 08 budget and about the same expected to FY 09. For the following biennium he said agencies could be requested to look at cuts as great as 14 percent. NDEP is fortunate that only about 1 percent of the budget is from general funds. Most of that is in the Bureaus of Water Quality Planning and Safe Drinking Water. One general fund position is being kept open in those programs. Many other programs in the Department of Conservation and Natural Resources (DCNR) are more heavily general fund, and NDEP is assisting in the overall Department picture by keeping some open positions for possible transfer from DCNR layoffs. The vacant positions are not causing any impairment in NDEP performing its mission.

### Coal-Fired Power Plants

Administrator Drozdoff said that while there was not a great deal new to report on this issue, NDEP had committed to regularly update the Commission. One reason there has not been a great deal of movement is that EPA has not made a finding on whether CO<sub>2</sub> (carbon dioxide) will cause adverse effects to endangered species. There is expected to be some finding on the Desert Rock facility in Arizona, and also Deseret Power in Utah before the Environmental Appeals Board that will clarify the situation relatively soon. NDEP is waiting to see what comes of those decisions.

### Climate Change Initiatives

Senate Bill 422 from the 2007 legislative session required an inventory of greenhouse gases which is expected to be complete by the end of calendar 2008; the other part of the bill required a registry, mandatory for power plants and voluntary for everyone else. The inventory will allow for measurement and proof of any future reductions. NDEP expects to have the regulations for this before the Commission before the end of 2008, as well.

Nevada joined the Climate Registry group about 18 months ago, and members have looked at working on a standard for measurement to prevent a patchwork of state rules. Four entities in Nevada (Sierra Pacific Resources, Newmont Energy, Newmont Corp. and NDEP) have now joined as supporters. NDEP felt it was important to join, both to show leadership and to participate with the companies to experience living with reporting.

The Governor's Climate Change Advisory Committee recently finished their report which will be available very shortly, or may be already. There were 28 recommendations, with six as priorities. Some examples include reducing greenhouse gases through an "intensity system," provisions with regard to renewable energy, demand management, and a process for judging new power plants based on the State's interest, which the Public Utilities Commission will seek to implement. Mr. Drozdoff said the Committee found that Nevada may be almost alone in regard to the combination of growth, power importation and renewable energy use if there is a "hard cap" placed on greenhouse gas emissions. Some of these recommendations will likely make their way into the next legislative session.

Nevada continues to be an observer at the Western Climate Initiative; the Governor's Committee unanimously recommended that Nevada continue observer status at the WCI because of that body's commitment a regional cap-and-trade program.

Mr. Drozdoff also mentioned the cleanup of the BRC site in Clark County, calling it a milestone; about \$60 million was spent to clean up the site and none was public money. He mentioned that the management of the BRC site

expressed interest in providing a tour of the site to the Commission at a possible future SEC meeting in Las Vegas.

Mr. Drozdoff said that completed his report.

Commissioner Gans asked about the interrelationship or “nexus” between NDEP and a number of private and public sector organizations that are moving toward sustainability. Mr. Drozdoff said that while there had not perhaps been major reductions in hard numbers (of greenhouse gases) that the green certification in building might also assist in getting better numbers for the building industry.

Commissioner Zimmerman asked about the Administrator’s report to the Commission at the March SEC meeting regarding EPA’s (and Region IX’s) emphasis on issuing violations versus NDEP’s methods of resolution; had NDEP had conversations with Region IX as yet? Mr. Drozdoff said they had had several conversations with Region IX and others at headquarters but he did not feel he had good news to report—he felt there was a real disconnect with the agency. He said there were pending cases that he could not talk about yet but at the next meeting he would have specifics to report to the Commission.

Chairman Dodgion asked about carbon-capture demonstration projects. Mr. Drozdoff said Nevada Power was still in the running for a demonstration of how it could work at a new facility using Powder River Coal. Department of Energy wants a cross section of projects in various regions under various conditions and Nevada Power feels they have good chances to be designated. Commissioner Coyner mentioned that oil producers in Railroad Valley have been approached for carbon storage or enhanced oil recovery utilizing CO2 capture from the proposed power plants.

Mr. Drozdoff mentioned that they were moving into the season of temporary regulations, though there were several “in the hopper” at LCB that met the deadline to be permanent, but there could be a mixture of temporary and permanent at future meetings.

Chairman Dodgion now moved down the agenda to:

## **8) Public Comment**

There was no additional public comment.

Chairman Dodgion thanked Commissioner Gans for the use of the facility for the meeting and declared the meeting adjourned.

## Appendix 1

### NDEP-BAPC SETTLEMENT AGREEMENTS

## NDEP-BAPC SETTLEMENT AGREEMENTS – June 17, 2008

TAB NO.	COMPANY NAME	VIOLATION	NOAV NUMBER(S)	PROPOSED SETTLEMENT AMOUNT
1	American AVK Company, Douglas County	NAC445B.275 “Violations: Acts Constituting; notice.” For failing to conduct initial emission compliance tests within the permitted timeframe (within 180 days of startup). American AVK conducted the initial compliance tests required by its operating permit five months late. The penalty is based on the Penalty Table developed by the NDEP-BAPC to assess penalties for violations not directly related to emissions.	2144	\$2,500
2	Humboldt Vega, LLC Elko County	NAC445B.275 “Violations: Acts Constituting; notice.” For operating a cement batch plant without the required air quality operating permit, and for failing to install and operate emission controls (wet dust suppression) necessary to control emissions from the plant’s lime silo loadout. The base penalty for each NOAV is based on the Penalty Table. Application of the Penalty Matrix, which is used to assess penalties for emissions-related violations, increased the penalty for failing to operate the emissions controls (NOAV 2132) from \$600 to \$1000 to reflect the amount of dust (lime, process fines) emitted from the loadout.	2131, 2132	\$4,000
3	Service Rock Products, Lincoln County	NAC445B.275 “Violations: Acts Constituting; notice.” For operating an aggregate processing plant without the required air quality operating permit, and for failing to apply for and obtain a revision to its air quality operating permit prior to constructing a concrete batch plant at the same location. The base penalty for each NOAV is based on the Penalty Table. The \$6,000 penalty for NOAV 2116 reflects the large size (multiple emission systems) of the aggregate plant. Because of the recurring nature of the violations, the base penalty of \$2,000 assessed for NOAV 2125 was increased by 40 percent, to \$2,800.	2116, 2125	\$8,800

## Appendix 2

### Class Waters Water Quality Standards Changes and Reorganization of all Water Quality Standards Tables

# Class Waters Water Quality Standards Changes And Reorganization of all Water Quality Standards Tables

Nevada Water Pollution Control Regulations  
NAC 445A.124 - NAC 445A.127, and  
NAC 445A.146 - NAC 445A.225

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# Discussion Outline

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Brief introduction to water quality standards

Summary of Nevada water quality standards

Summary of Class Waters

Proposed Changes

- ◆ Clean Up & Update Class Waters
- ◆ Reorganization All Waters

# Water Quality Standards

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## Key Elements

- Designated beneficial uses
- Criteria to protect beneficial use
- Antidegradation provision

# Water Quality Standards

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## Beneficial Uses, NAC 445A.122

- Municipal or domestic supply
- Irrigation
- Watering livestock
- Propagation of aquatic life (coldwater, warm water fish)
- Propagation of wildlife
- Industrial Supply
- Recreation involving contact with the water (swimming)
- Recreation not involving contact with the water (boating)

# Water Quality Standards

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- Criteria - protect beneficial use
  - ◆ Aquatic life – ammonia
  - ◆ Contact recreation – E. Coli
- Antidegradation provision (RMHQ)

# Nevada Water Quality Standards

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## Types of Standards

- 1) Narrative - NAC 445A.121, apply to all surface waters
- 2) Toxics - NAC 445A.144
- 3) Designated waters - NAC 445A.146 to NAC445A.225
- 4) Class waters - NAC 445A.124 to NAC445A.127

# Class Waters

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## Description

- 4 Classes – A, B, C & D (B and C – Trout)
  - NAC 445A.124 – 445A.127
  - A – Higher Quality
  - B - Trout (T & DO) – Non Trout
  - C - Trout (T & DO) – Non Trout
  - D – Lower Quality

# Class Waters

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## Description

- Each Class:
  - Set of beneficial uses,
  - Set of water quality standards,
  - List of waters that belong in that class (sorted by county).

# Class Waters

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## ■ Issues

- ◆ Inflexible – If change one standard change for all the class
  - ◆ Temperature
    - Irrigation Reservoir
  - ◆ E. Coli
  - ◆ Antidegradation/RMHQ Standards

# Class Waters

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- ELIMINATE THE CURRENT CLASS WATERS FORMAT
  - ◆ Create a WQS table for each water of each class

# Class Waters Changes

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- 1) Clean Up & Update “Regulatory”
  - ◆ Remove Beneficial Use qualifiers
  - ◆ Remove Class Narrative standards
  - ◆ Redefine Natural Conditions (TDS & Fecal C)
  - ◆ Add Ammonia & E. Coli to Class Waters
- 2) Reorganization “Administrative”
  - ◆ Eliminate the current class waters format
  - ◆ Adjust reach descriptions (from upstream to down)
  - ◆ Reformat all WQS tables to show beneficial uses
  - ◆ Reorganize and renumber water quality standards tables by Hydrographic Region (NAC 445A.124 through 127 and 146 through 225)

# Class Waters Changes

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- Clean Up & Update “Regulatory”
  - ◆ Changes to Class Waters to permit merging the class waters with Designated waters.
  - ◆ Water Quality Standards Changes
  
- Reorganization “Administrative”
  - ◆ Eliminate the current class waters format and create table for each water
  - ◆ Reorganize and renumber water quality standards tables by Hydrographic Region (NAC 445A.124 through 127 and 146 through 225)

# Class Waters Changes

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## 1) Clean Up & Update

- ◆ Remove Beneficial Use Qualifiers
  - ◆ To match to NAC 445A.122
- ◆ Remove Class Narrative Standards
  - ◆ Redundant with NAC 445A.121
- ◆ Refine Natural Conditions (TDS & Fecal C)
- ◆ Add Ammonia Standards Referring to NAC 445A.118
- ◆ Add E. Coli Standard

# Remove Beneficial Use Qualifiers

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## ■ Class A

- ◆ Municipal or domestic supply or both, ~~with treatment by disinfection only~~, aquatic life, propagation of wildlife, irrigation, watering of livestock, contact and non-contact recreation.

## ■ Class B

- ◆ Municipal or domestic supply or both, ~~with treatment by disinfection and filtration only~~, aquatic life, propagation of wildlife, irrigation, watering of livestock, contact and non-contact recreation and industrial supply.

## ■ Class C

- ◆ Municipal or domestic supply or both, ~~following complete treatment~~, aquatic life, propagation of wildlife, irrigation, watering of livestock, contact and non-contact recreation and industrial supply.

## ■ Class D

- ◆ Noncontact recreation, aquatic life, propagation of wildlife, irrigation, watering of livestock, and industrial supply ~~except for food processing purposes~~.

# Remove Class Waters Narrative Standards

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## Class A Narrative Standards (NAC 445A.124)

- Floating solids, sludge deposits, tastes or odor-producing substances.
  - ◆ None attributable to man's activities.
- Sewage, industrial wastes or other wastes.
  - ◆ None.
- Toxic materials, oils, deleterious substances, colored or other wastes.
  - ◆ None.
- Settleable solids.
  - ◆ Only amounts attributable to man's activities which will not make the waters unsafe or unsuitable as a drinking water source or which will not be detrimental to aquatic life or for any other beneficial use established for this class.

## Narrative Standards NAC 445A.121

# Refine Natural Conditions Standards

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- Natural Condition references for
  - ◆ Total Dissolved Solids (TDS)
  - ◆ Fecal Coliform
- 95<sup>th</sup> percentile
- The TDS standard for class A, B and C is:
  - ◆  $\leq 500$  mg/l or ~~one-third above that characteristic of natural conditions~~ **the 95<sup>th</sup> percentile** (whichever is less).

# Natural Conditions

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- The Fecal Coliform standard for class C is:

Fecal Coliform. The more stringent of the following apply:

- ◆ 1. The fecal coliform concentration must not exceed a geometric mean of 1000 per 100 milliliters, and not more than 20 percent of total samples may exceed 2400 per 100 milliliters.
- ◆ 2. ~~The annual geometric mean of fecal coliform concentration must not exceed that characteristic of natural conditions by more than 200 per 100 milliliters, and the number of fecal coliform in a single sample must not exceed that characteristic of natural conditions by more than 400 per 100 milliliters.~~ **The fecal coliform concentration must not exceed the 95th percentile of the AGM or the 95th percentile of n, where n equals a number of single value samples as determined by the division.**
- ◆ 3. ~~The fecal coliform concentration, based on a minimum of five samples during any 30-day period, must not exceed a geometric mean of 200 per 100 milliliters, and not more than 10 percent of total samples during any 30-day period may exceed 400 per 100 milliliters. This is applicable only to those waters used primarily for recreation involving contact with the water.~~

# Add Ammonia To Protect Aquatic Life

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A standard will be added for total ammonia to each class water.

- ◆ A footnote will reference the total ammonia tables and the algebraic formula in NAC 445A.118.

# Add E.Coli No./100 ml

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- Contact Recreation – both AGM & SV
  - Class A, B & C
    - ◆ AGM – 126
    - ◆ Single Value
      - ◆ Designated Beach Area - 235
      - ◆ Moderate Body Contact - 298
      - ◆ Lightly Used - 410
      - ◆ Infrequently used - 576
  
- Noncontact Recreation – Class D
  - ◆ AGM - 630

# Class Waters

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1. Class Waters Changes
  - Questions?
2. Reorganizing the Water Quality Standards Tables

# Water Quality Tables Reorganization

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- 2) Reorganizing the Water Quality Standards Tables
  - ◆ Eliminate the current class waters format and create an individual table showing water quality standards for each waterbody in each class.
  - ◆ Adjust reach descriptions
  - ◆ Reformat all water quality standard tables to better show beneficial uses
  - ◆ Reorganize water quality standards tables by Hydrographic Region and renumber all the waterbody tables (NAC 445A.124 through 127 and 146 through 225);

# Reasons for Reorganization

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- Class Waters, Inflexible – If change one standard change for all the class
- Waters “Out of Order”
  - ◆ Muddy, 209 – 211 – Uses for 211 in 174
  - ◆ Virgin River in w/ Creeks, not with the Colorado or Muddy
- Proposing to Reorder All Waters by Hydrographic Basin
  - ◆ Northwest
  - ◆ Black Rock
  - ◆ Snake

# Water Quality Tables Reorganization

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- Adjust reach descriptions
  - ◆ Some reach descriptions are described from downstream to upstream others are described from upstream to down.
- Describe all reaches from upstream to down.
  - ◆ ~~Control Point at Dayton Bridge. The limits of this table apply from Dayton Bridge to New Empire.~~ **The Carson River from New Empire to the Dayton Bridge**

Waterbody Name	Segment Description	Beneficial Uses											Aquatic Species of Concern	Water Quality Standard NAC Reference	
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh			
Boulder Reservoir	The entire reservoir.	X	X	X	X	X	X		X						445A.149001
Blue Lakes	Entire area.	X	X	X	X	X	X		X						445A.149002
Catnip Reservoir	The entire reservoir.	X	X	X	X	X	X		X						445A.149003
Wall Canyon Reservoir	The entire reservoir.	X	X	X	X	X	X	X	X					Trout	445A.149004
Knott Creek Reservoir	The entire reservoir.	X	X	X	X	X	X	X	X					Trout	445A.149005
Onion Valley Reservoir	The entire reservoir.	X	X	X	X	X	X	X	X					Trout	445A.149006
Livestock	Watering of livestock														
Irrigation	Irrigation														
Contact	Recreation involving contact with the water														
Noncontact	Recreation not involving contact with the water														
Industrial	Industrial supply														
Municipal	Municipal or domestic supply, or both														
Wildlife	Propagation of wildlife														
Aquatic	Propagation of aquatic life														
Aesthetic	Waters of extraordinary ecological or aesthetic value														

## 445A.149 Carson River: East Fork at the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum  DT <sup>a</sup>	DT = 0°C	Nov.-May : <13°C June : <17°C July : <21°C Aug.-Oct. : <22°C DT <2°C	Aquatic life <sup>b</sup> and recreation involving contact with the water.
pH Units		S.V. : 6.5 - 9.0 DpH : ±0.5 Max.	Recreation involving contact with the water, <sup>b</sup> propagation of wildlife, <sup>b</sup> aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	AAvg. : <.03 S.V. : <.065	A-Avg. : <0.10	Aquatic life, <sup>b</sup> recreation involving contact with the water, <sup>b</sup> municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen : <0.5 A-Avg. : <1.1  S.V.	Nitrate S.V. : <10 Nitrite S.V. : <.06	Aquatic life, <sup>b</sup> municipal or domestic supply, <sup>b</sup> recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l		e	Aquatic life. <sup>b</sup>
Dissolved Oxygen - mg/l		S.V. Nov.-May : >6.0 Jun.-Oct. : >5.0	Aquatic life, <sup>b</sup> recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.

STANDARDS OF WATER QUALITY

Carson River

The limits of this table apply only to the west fork at the state line

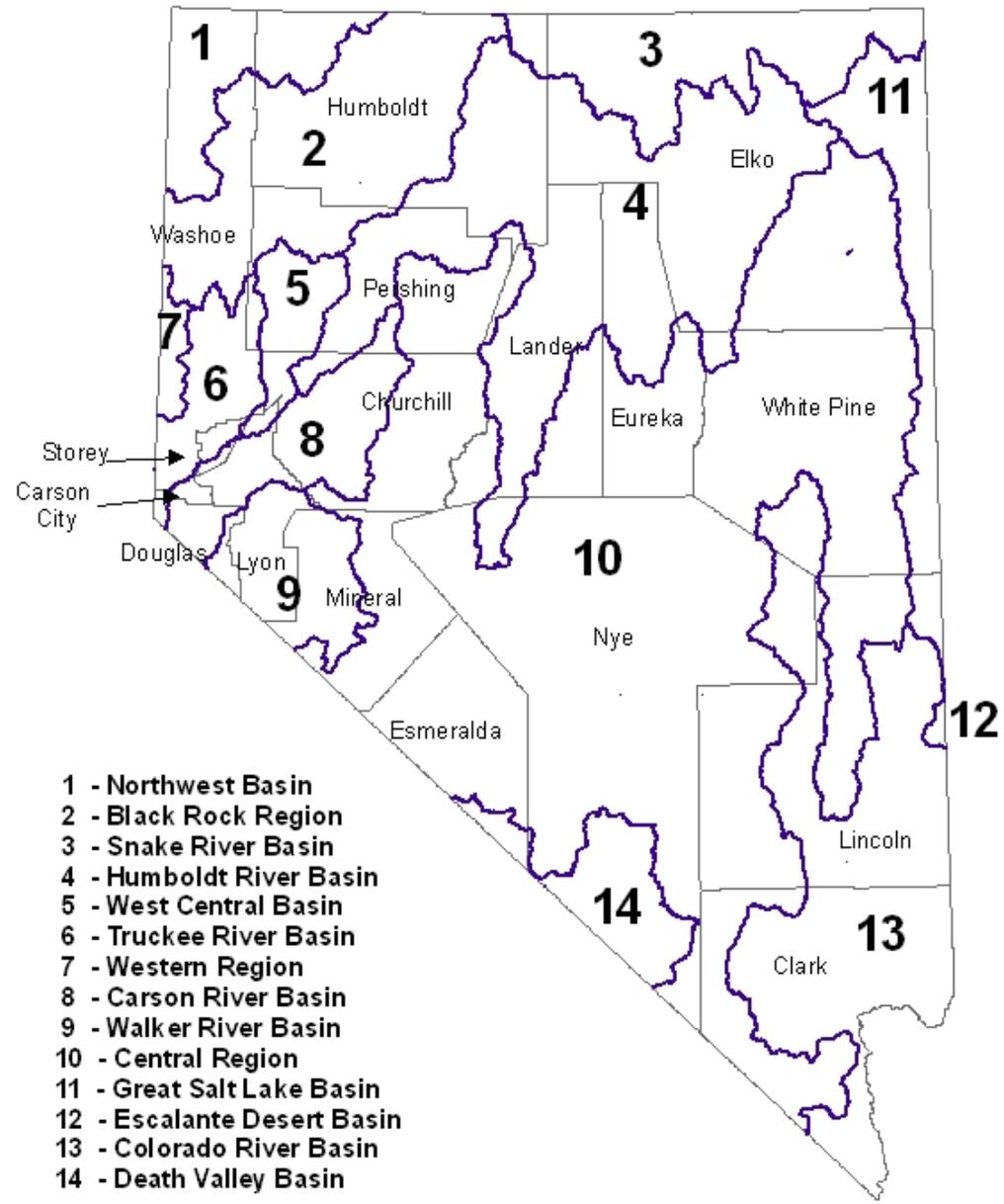
PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use <sup>a</sup>											
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh	
Beneficial Uses for NAC 445A. 163001			X	X	X	X	X	X	X	X				
Aquatic Life Species of concern			rainbow trout and brown trout.											
Temperature °C- Maximum ΔT <sup>b</sup>		Nov.-May : ≤13°C June : ≤17°C July : ≤21°C Aug.-Oct. : ≤22°C Δ T : ≤2°C			*	X								
pH Units	7.4 - 8.4	S.V. : 6.5 - 9.0 ΔpH : ±0.5 Max.	X	X	X	*		X	X	*				
Total Phosphates (as P) - mg/l	A-Avg. : ≤.016 S.V. : ≤.033	A-Avg. : ≤0.10			*	*	X	X						
Nitrogen Species (N) - mg/l	A-Avg. : ≤0.4 S.V. : ≤0.5	Nitrate S.V. : ≤10 Nitrite S.V. : ≤0.6	X		*	X	X	*		X				
Total Ammonia (as N) - mg/l		c			*									
Dissolved Oxygen - mg/l		S.V. : Nov.-May : ≥5.0 Jun.-Oct. : ≥6.0	X		*	X	X	X		X				

**NAC 445A. 149001 Boulder Reservoir: the entire reservoir.**  
**STANDARDS OF WATER QUALITY**  
**Boulder Reservoir**

The limits of this table apply to the entire reservoir.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use										
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh
Beneficial Uses for NAC 445A. 149001			X	X	X	X	X	X		X			
Aquatic Life Species of concern													
Temperature °C $\Delta T^a$		SV $\leq 20$ 0			*	X							
pH Units		S.V. 6.5 - 9.0	X	X	*	*		X		*			
Total Phosphorous (as P) - mg/l		S.V. $\leq 0.05^b$ S.V. $\leq 0.025^b$ S.V. $\leq 0.10^b$			*	*	X	X					
Dissolved Oxygen - mg/l		S.V. $\geq 6.0$	X		*	X	X	X		X			
Total Ammonia (as N) - mg/l		$\leq 1.0^c$			*								
Total Dissolved Solids - mg/l		SV. $\leq 500$ or <b>the 95<sup>th</sup> percentile</b> (whichever is less).	X					*					
E coli - No./100 ml		AGM $\leq 126$ SV $\leq 410$				*	X						
Fecal Coliform- No./100 ml		$\leq 200/400^d$	X	X		*	X	X		X			

# Nevada Water Resources Hydrographic Regions



# Designated Waters Index

## INDEX TABLE – By Region

Waterbody Name	Waterbody Description	County	NAC445A.XXXXX	
			Beneficial Use	Water Quality Standards
<b>NORTHWEST BASIN</b>				
Boulder Reservoir	The entire reservoir.	Washoe	445A.148	445A.149001
Blue Lakes	Entire area.	Humboldt	445A.148	445A.149002
Catnip Reservoir	The entire reservoir.	Washoe	445A.148	445A.149003
Wall Canyon Reservoir	The entire reservoir.	Washoe	445A.148	445A.149004
Knott Creek Reservoir	The entire reservoir.	Humboldt	445A.148	445A.149005
Onion Valley Reservoir	The entire reservoir.	Humboldt	445A.148	445A.149006
<b>BLACK ROCK BASIN</b>				
Smoke Creek	Approximately 30 miles east of Susanville California.	Washoe	445A.150	445A.151001
Squaw Creek Reservoir	The entire reservoir.	Washoe	445A.150	445A.151002
Negro Creek	From its origin to the first irrigation diversion, near west line of section 28, T. 36 N., R. 23 E, M.D.B. & M.	Washoe	445A.150	445A.151003
Summit Lake	The entire lake.	Humboldt	445A.150	445A.151004
Mahogany Creek	From its origin to Summit Lake.	Humboldt	445A.150	445A.151005
Leonard Creek	From its origin to the first point of diversion, near the south line of section 12, T. 42 N., R. 28 E, M.D.B. & M.	Humboldt	445A.150	445A.151006
Bilk Creek	From its origin to its intersection with the south line of section 35, T. 45 N., R. 32 E., M.D.B. & M.	Humboldt	445A.150	445A.151007

INDEX TABLE - ALPHABETICALLY

Waterbody Name	Waterbody Description	County	Hydrographic Region	NAC445A.XXXXX	
				Beneficial Use	Water Quality Standards
76 Creek	Its entire length.	Elko	Snake	445A.152	445A.153021
Adams McGill Reservoir	The entire reservoir.	Nye	Colorado	445A.172	445A.173019
Angel Lake	The entire lake. .	Elko	Central	445A.166	445A.167027
Ash Canyon	From its origin to the first point of diversion of the Carson City water department, near the west line of section 12, T. 15 N., R. 19 E, M.D.B. & M.	Carson City	Carson	445A.162	445A.163020
Baker Creek	From its origin to the national forest boundary	White Pine	Great Salt Lake	445A.168	445A.169003
Barley Creek	From its origin to the first point of diversion, near the national forest boundary.	Nye	Central	445A.166	445A.167019
Bear Creek	From its origin to the point of diversion for the Jarbidge municipal water supply, near the east line of section 17, T. 46 N., R. 58 E, M.D.B. & M.	Elko	Snake	445A.152	445A.153020
Beaver Dam Wash	Above Schroeder Reservoir	Lincoln	Colorado	445A.172	445A.173013
Berry Creek	From its origin to pipeline intake near the national forest boundary.	White Pine	Central	445A.166	445A.167038
Big Creek	From its origin to the east boundary of United States Forest Service Big Creek Campground	Lander	Humboldt	445A.154	445A.155053
Big Creek	From the east boundary of the United States Forest Service Big Creek Campground to the first diversion dam, near the west line of section 4, T. 17 N., R. 43 E, M.D.B. & M.	Lander	Humboldt	445A.154	445A.155054
Big Goose Creek		Elko	Snake	445A.152	445A.153001

# Water Quality Tables Reorganization

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1. Class Waters Changes
2. Reorganizing the Water Quality Standards Tables

# Meetings With Stakeholders

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- Stakeholders Meetings
  - ◆ BLM, USFS, Humboldt River Water Authority, NMA, USFWS, and NDOW
  - ◆ Lake Mead Water Quality Forum
- Workshops
  - ◆ May – June 2006
    - ◆ Las Vegas, Carson City, Elko
  - ◆ November – December 2007
    - ◆ Las Vegas, Carson City, Elko

# Class Waters Water Quality Standards Changes And Reorganization of all Water Quality Standards Tables

Nevada Water Pollution Control Regulations  
NAC 445A.124 - NAC 445A.127, and  
NAC 445A.146 - NAC 445A.225

## Are there any questions?

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## Appendix 3

### **Muddy River Proposed Revisions To Water Quality Standards**

# Muddy River

## Proposed Revisions To Water Quality Standards

Proposed Regulation R083-08

Nevada Division of Environmental Protection

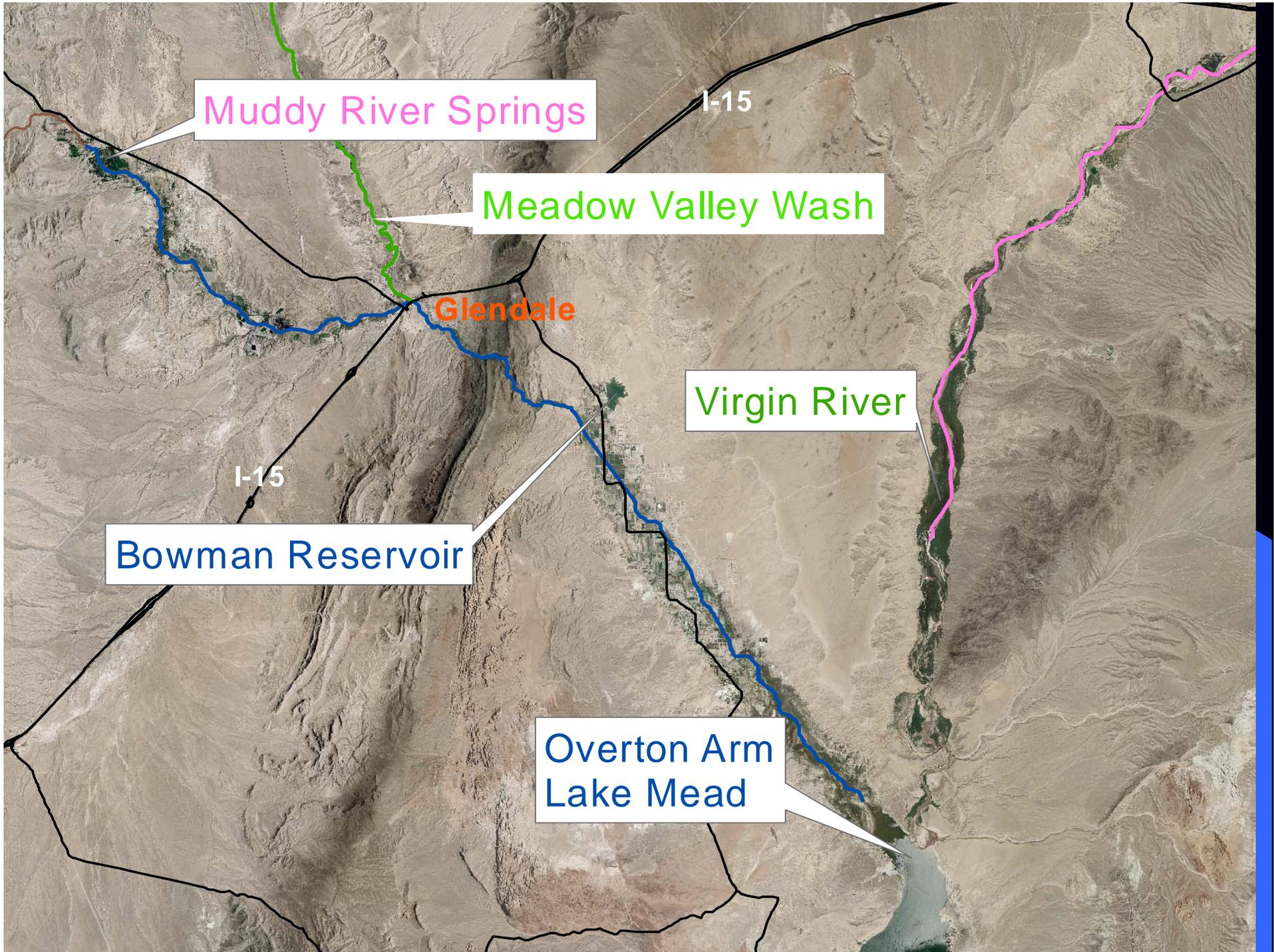
Bureau of Water Quality Planning

June 17, 2008

# Muddy River Water Quality Standards Review

- Public Workshops (Mid-March)  
(Carson City, Overton, Las Vegas)
- Coordination with USFWS and NDOW
- Involvement of EPA-Region 9





Muddy River Springs

Meadow Valley Wash

Glendale

Virgin River

Bowman Reservoir

Overton Arm  
Lake Mead

I-15

I-15

# Proposed Changes Water Quality Regulations

- Separate Muddy River Into 3 Reaches
- Beneficial Uses
  - Add "Recreation Involving Contact With Water"  
All Sections River
- Exclusion-Moapa Paiutes Tribal Land

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

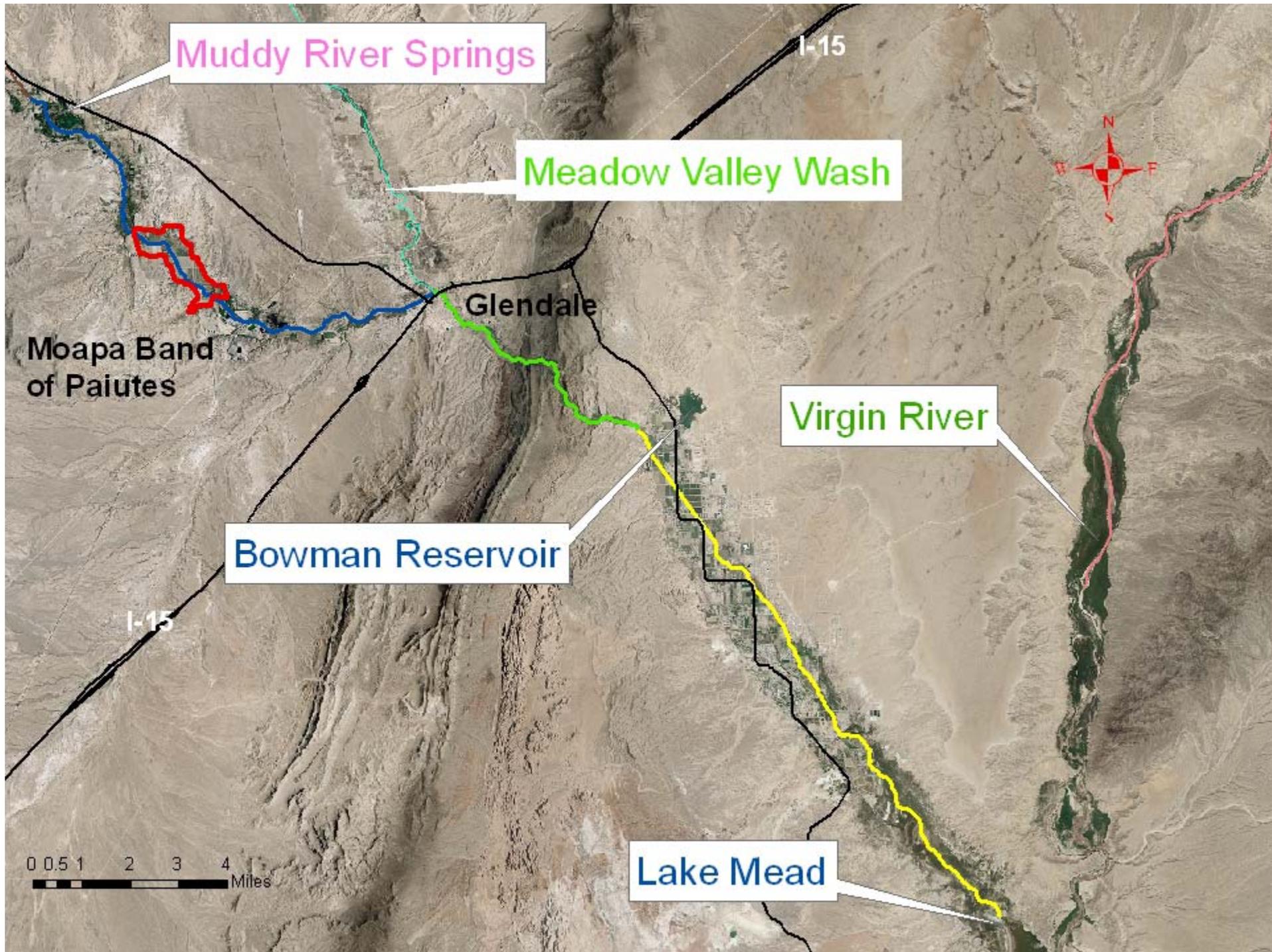
Temperature

Fluoride

Color (upper reach)

Boron (lower reach)

Bowman Reservoir



# Proposed Revisions Water Quality Criteria

**E. Coli bacteria**

Temperature

Fluoride

Color (upper reach)

Boron (lower reach)

Bowman Reservoir

# Proposed Revisions *E. coli* Bacteria Criteria

## Rationale

- Clean Water Act Goals
- Water Recreation Activities

# Proposed Revisions

## *E. coli* Bacteria Criteria

Existing:  $\leq 630$  per 100 ml (AGM)

Proposed:  $\leq 126$  per 100 ml (AGM)

$\leq 410$  per 100 ml (SV)

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

**Temperature**

Fluoride

Color (upper reach)

Boron (lower reach)

Bowman Reservoir

# Muddy River Temperature Water Quality

## Existing Criteria

$\leq 21\text{ }^{\circ}\text{C}$  (November to June)

$\leq 32\text{ }^{\circ}\text{C}$  (July to October)

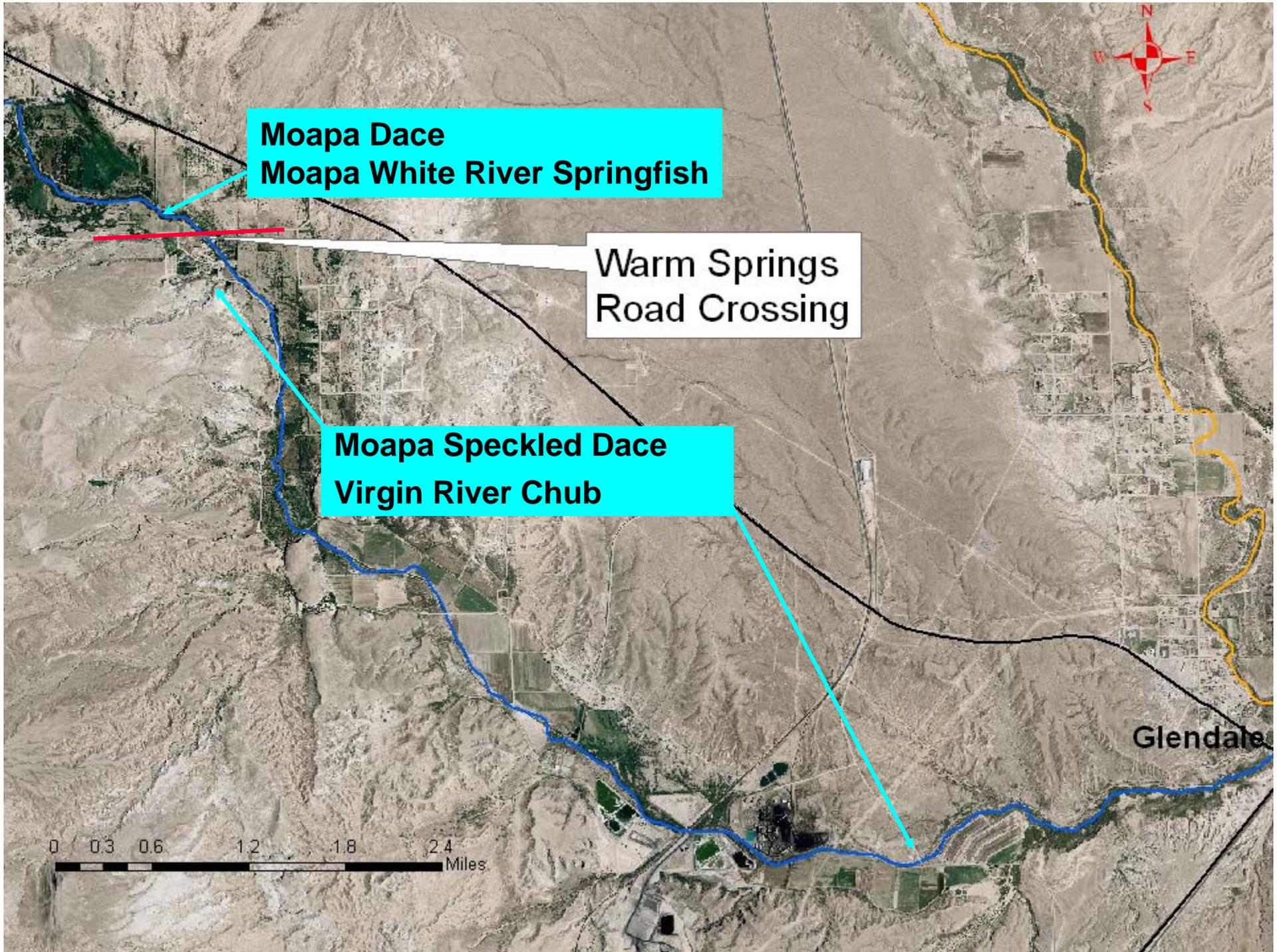
$\Delta T \leq 2\text{ }^{\circ}\text{C}$  (BUS)

$\Delta T = 0\text{ }^{\circ}\text{C}$  (anti-degradation)

# Proposed Revisions Temperature Water Quality Criteria

## Approach

- Distribution of native fish species
- Habitat temperature preferences
- Consultation meetings NDOW & USFWS



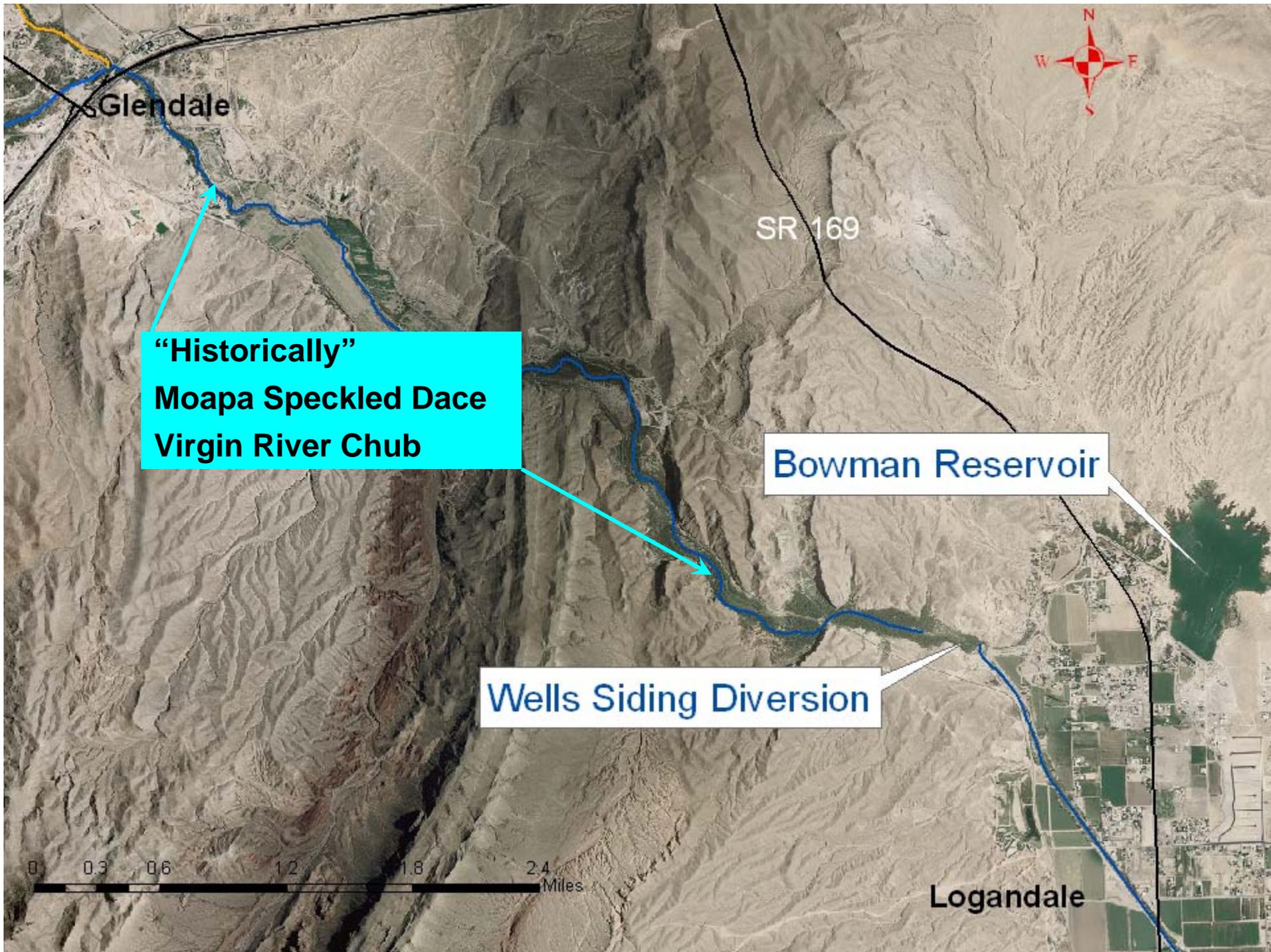
**Moapa Dace**  
**Moapa White River Springfish**

Warm Springs  
Road Crossing

**Moapa Speckled Dace**  
**Virgin River Chub**

Glendale

0 0.3 0.6 1.2 1.8 2.4 Miles



# Proposed Temperature Water Quality Criteria

## Upper Reach

Above Warm Springs Rd.

$$19\text{ }^{\circ}\text{C} \leq T \leq 32\text{ }^{\circ}\text{C}$$

Below Warm Springs Rd.

$$15\text{ }^{\circ}\text{C} \leq T \leq 30\text{ }^{\circ}\text{C}$$

## Middle Reach

$$15\text{ }^{\circ}\text{C} \leq T \leq 30\text{ }^{\circ}\text{C}$$

## Lower Reach

$$T \leq 32\text{ }^{\circ}\text{C}$$

For all reaches

$$\Delta T \leq 2\text{ }^{\circ}\text{C} \text{ (BUS) \&}$$
$$\Delta T = 0\text{ }^{\circ}\text{C} \text{ (RMHQ)}$$

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

Temperature

**Fluoride**

Color (upper reach)

Boron (lower reach)

Bowman Reservoir

# Fluoride Criteria

- Statewide Fluoride Criteria - NAC 445A.144
- EPA Blue Book 1972 Recommendations  
Irrigation Criteria  
1 mg/l for continuous irrigation  
[15 mg/l for irrigation (20 yrs) on neutral  
alkaline soils]

## Livestock Watering Criteria

2 mg/l recommended as upper limit for  
fluoride in livestock drinking waters

# Muddy River Fluoride Levels

- Source Springs - Upper River  
Elevated Natural Background Levels  
> 2 mg/l
- Lower Section River  
Reduced Flow ( $\approx$  70 pct)  
Evaporative Concentration of Fluoride  
Levels ( $\approx$  20 pct increase)

# Proposed Revisions Fluoride Water Quality Criteria

## Approach

- 95<sup>th</sup> Percentile of Measured Levels

## Proposed Criteria

- Upper Reach 2.6 mg/l
- Middle Reach 2.6 mg/l
- Lower Reach 3.6 mg/l

# Evaluation Proposed Fluoride Criteria

- Beneficial Uses
  - Support - Protect
- Irrigation and Livestock Watering

# Irrigation - Fluoride

- Recent scientific studies have shown:
  - Alkaline soils with clays, calcium, and organic material limit fluoride mobility and availability.
  - Secondary transfer of fluoride to livestock not as critical of an issue as once thought to be.

# Irrigation Fluoride Toxicity

- Deposition of soluble fluoride salts on plants rather than root uptake.
- Work published by Kabata-Pendias (2001)  
Growth of certain species of plants able to withstand high fluoride concentrations

Barley grass/sorrel	24 mg/l
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Oats	32 mg/l
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# Proposed Fluoride Criteria Irrigation

## Evaluation

- Moapa Valley soils - alkaline
- Flood irrigation techniques used in Moapa Valley
- Alfalfa hay is major forage crop grown

# Livestock Watering Fluoride

- Recent scientific studies have shown:
  - Cattle most sensitive livestock
  - Fluoride effects - chronic
  - Dairy Cattle - target group

# Fluoride Thresholds

	Diet dry matter (mg/kg F)	Drinking Water (mg/l F)
Young Dairy Cattle	30	2.5 - 4.0
Mature Dairy Cattle	40	3 - 6
Mature Beef Cattle	50	4 - 8
Slaughter Cattle	100	12 - 15

Source: Puls (1994) Mineral Levels in Animal Health

# Proposed Fluoride Criteria Livestock Watering

## Evaluation

### In Moapa Valley

- No active dairy operations
- Small-scale cattle production

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

Temperature

Fluoride

**Color (upper reach)**

Boron (lower reach)

Bowman Reservoir

# Proposed Revisions Color Criteria

## Rationale

- Upper Muddy River - Municipal and Domestic Supply Beneficial Use
- $\leq 75$  color units (EPA Gold Book 1986)

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

Temperature

Fluoride

Color

**Boron (lower reach)**

Bowman Reservoir

# Lower Muddy River Boron Irrigation Criteria

- Existing Irrigation Criteria: 0.75 mg/l  
Tolerance level for "sensitive" plants to boron
- Proposed Revised Criteria  
Based on "how & where" water used and types of crops/plants grown  
Boron tolerance level for "non-sensitive" plants  
Proposed irrigation criteria: 2.0 mg/l

# Boron Tolerance Limits

Boron (mg/l)	Crops
< 0.75	Lemon, Orange, Peach, Grape, Walnut, Pecan
0.75 to 1.0	Garlic, Wheat, Bean, Sunflower, Strawberry
1.0 to 2.0	Broccoli, Pea, Carrot, Radish, Potato, Lettuce
2.0 to 4.0	Cabbage, Barley, Oats, Corn, Artichoke, Clover (sweet), Squash
4.0 to 6.0	Alfalfa, Parsley, Beet, Tomato

Source: Maas, (1990) Salt Tolerance of Plants, CRC Handbook of Plant Science in Agriculture.

# Proposed Revisions Water Quality Criteria

*E. Coli* bacteria

Temperature

Fluoride

Color

Boron (lower reach)

**Bowman Reservoir**

# Summary

## Bowman Reservoir

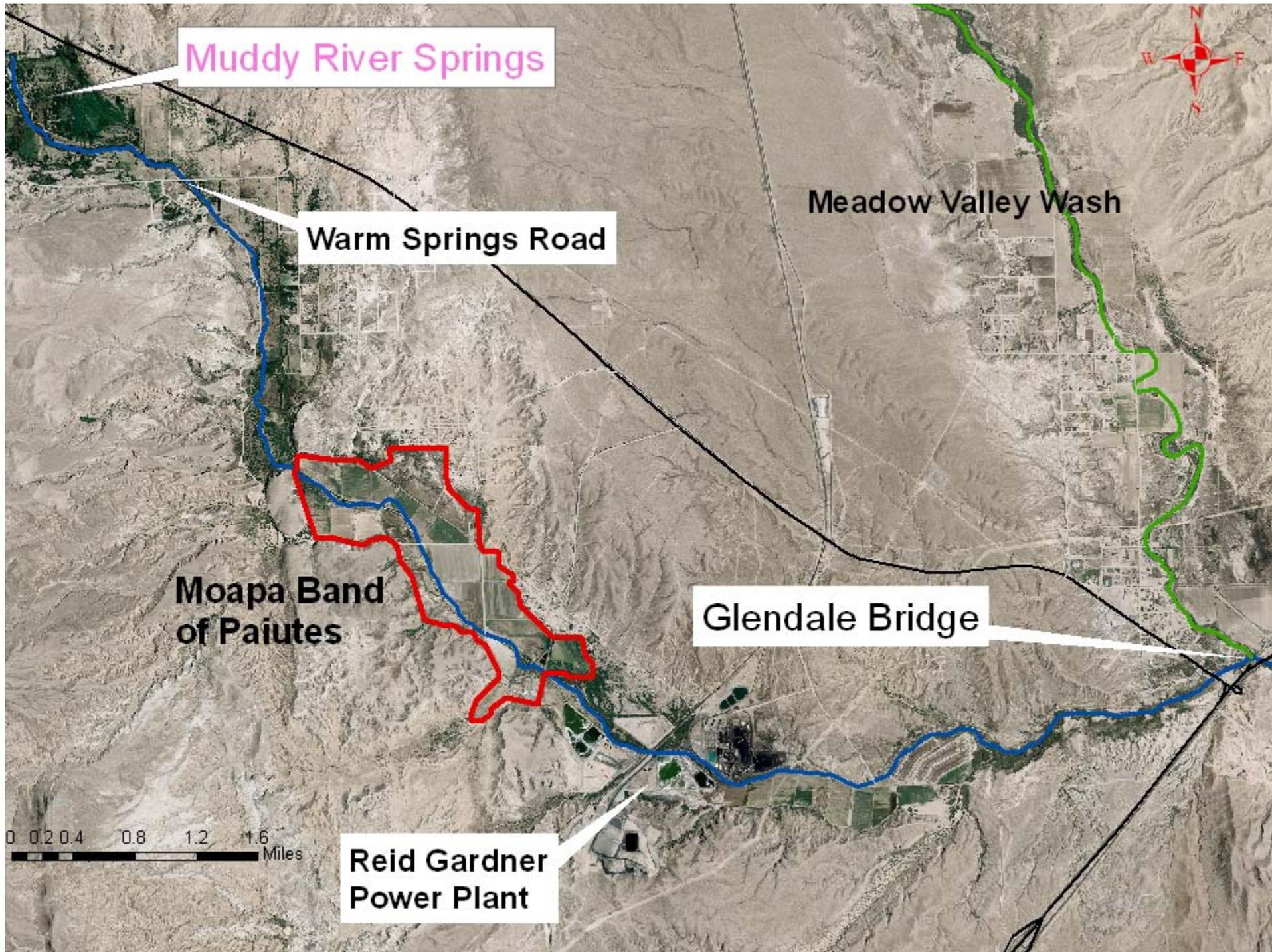
- Class Waters Restructuring (NDEP-BWQP)
- Water Quality Criteria
  - NAC 445A.126 with following exceptions:
    - Fluoride: 2.6 mg/l
    - TDS: change to reflect water of Colorado River basin

# Impacts to Lake Mead

- Fluoride
- Overton Arm Monitoring  
Historical and On-going  
Fluoride Levels (mg/l)  
July 1965 - Jan 1966: 0.26 to 1.0  
Aug 2007 - May 2008: 0.33 to 0.56

# Impacts to Lake Mead

- Boron
- Overton Arm Monitoring  
Historical and On-going  
Boron Levels (mg/l)  
July 1965 - Jan 1966: 0.12 to 0.46  
Aug 2007 - May 2008: 0.13 to 0.54





Glendale Bridge

Wells Siding Diversion

Bowman Reservoir

I-15

SR  
169



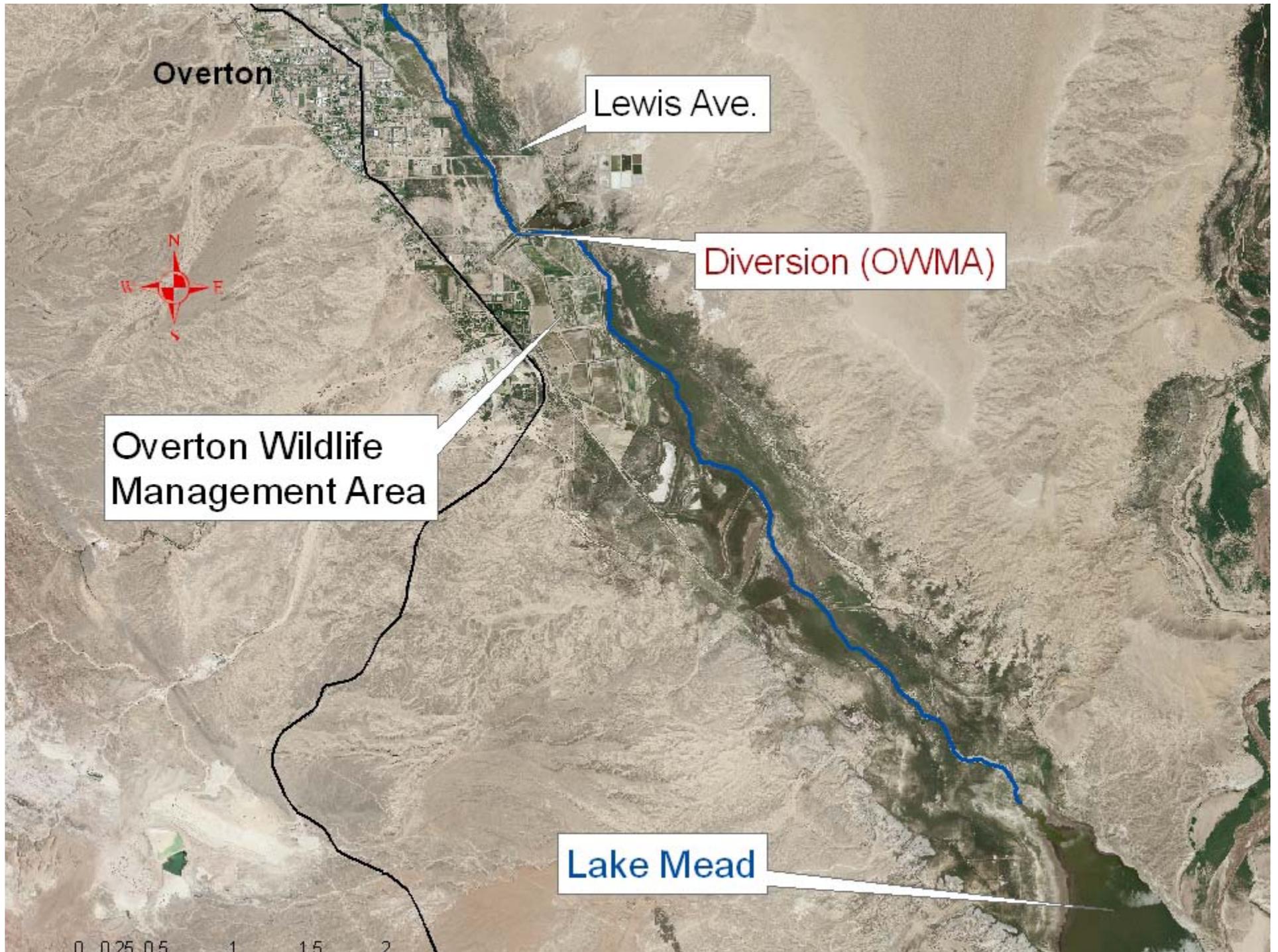


Wells Siding Diversion

Logandale

Overton

Overton Wildlife  
Management Area



Overton

Lewis Ave.

Diversion (OWMA)

Overton Wildlife Management Area

Lake Mead

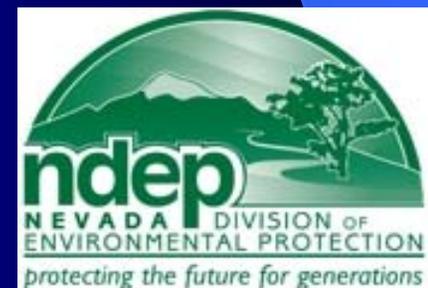
0 0.25 0.5 1 1.5 2



# Questions / Additional Information

Paul Comba [pcomba@ndep.nv.gov](mailto:pcomba@ndep.nv.gov)

<http://ndep.nv.gov/bwqp>



Appendix 4

**Revision to R194-07**

*which may be requested by the Division or other administrative authority to determine whether cause exists pursuant to subsection 1 for modifying, revoking, suspending or cancelling the permit or to determine whether the holder is in compliance with the conditions of the permit.*

**Sec. 57. 1.** *Except as otherwise provided in this section, a request for a letter of approval to construct or an application for a permit to operate an on-site sewage disposal system submitted to the Division or other administrative authority must be denied if:*

*(a) The Division or other administrative authority determines that the proposed system will not comply with sections 3 to 89, inclusive, of this regulation;*

*(b) The proposed system is located within an area which is currently part of a plan prepared pursuant to section 208 of the Clean Water Act of 1977, 33 U.S.C. § 1288, prohibiting the use of on-site sewage disposal systems;*

*(c) The proposed system is located within an area for which the Division has issued a moratorium on on-site sewage disposal systems; or*

*(d) A public or community sewerage system, which includes in its jurisdiction the property where the proposed on-site sewage disposal system is located, is available ~~[at the property line of the proposed system]~~, except that a letter of approval or permit may be granted by the Division or other administrative agency if the public or community sewerage system approves, in writing, the construction or operation of the proposed on-site sewage disposal system.*

*2. A denial by the Division or other administrative authority of a request for a letter of approval or a permit for an on-site sewage disposal system must be in writing and must specify the reasons for the denial.*

**Sec. 58.** *Except as otherwise provided in NRS 445A.605 and 445A.610:*

*1. A person who submits a request for a letter of approval to construct or an application*