STATE OF NEW MEXICO
BEFORE THE WATER QUALITY CONTROL COMMISSION

In the Matter of:

IN THE MATTER OF THE PETITION FOR PROPOSED AMENDMENTS TO 20.6.4.9 NMAC, DESIGNATION OF WATERS OF THE UPPER PECOS WATERSHED AS OUTSTANDING NATIONAL RESOURCE WATERS

No. WQCC 20-18 (R)

San Miguel County, the Village of Pecos, the New Mexico Acequia Association, Molino de la Isla Organics LLC, and the Upper Pecos Watershed Association,

Petitioners.

NEW MEXICO ENVIRONMENT DEPARTMENT'S
NOTICE OF INTENT TO PRESENT REBUTTAL TESTIMONY

Pursuant to 20.1.6.202 NMAC and the *Procedural Order & Hearing Guidelines* issued November 20, 2020, the New Mexico Environment Department ("Department") submits this Notice of Intent to Present Rebuttal Testimony for the hearing in this matter currently scheduled to begin April 13, 2021.

1. Entity for whom the witnesses will testify

The Surface Water Quality Bureau of the Water Protection Division of the Department.

2. Identity of witnesses

The Department will call the following witnesses to present rebuttal testimony at the hearing:

Jennifer Fullam is the Standards, Planning and Reporting Team Supervisor and the Water Quality Standards Coordinator with the Department's Surface Water Quality Bureau. Her resume describing her educational and professional background was attached as NMED Exhibit 1 to the *New Mexico Environment Department's Notice of Intent to Present Technical Testimony*, filed on

March 10, 2021. A copy of Ms. Fullam's written rebuttal testimony is attached as NMED Exhibit 16.

Diana Aranda is a Scientist/Specialist-Advanced on the Standards, Planning, and Reporting Team with the Department's Surface Water Quality Bureau. Her resume was attached as NMED Exhibit 3 to the *New Mexico Environment Department's Notice of Intent to Present Technical Testimony*, filed on March 10, 2021. A copy of Ms. Aranda's written rebuttal testimony is attached as NMED Exhibit 17.

3. Estimated duration of oral testimony of witnesses

Ms. Fullam 15 minutes

Ms. Aranda 20 minutes

4. List of exhibits to be offered by the Department at the hearing.

A complete list of NMED exhibits is listed here. NMED Exhibits 1 through 15 were included with the *New Mexico Environment Department's Notice of Intent to Present Technical Testimony*, filed on March 10, 2021. NMED Exhibits 16 through 22 are included with this *Notice of Intent to Present Rebuttal Testimony*.

EXHIBIT NUMBER	TITLE OF EXHIBIT
NMED Exhibit 1	Resume of Jennifer Fullam
NMED Exhibit 2	Written Direct Testimony of Jennifer Fullam
NMED Exhibit 3	Resume of Diana Aranda
NMED Exhibit 4	Written Direct Testimony of Diana Aranda
NMED Exhibit 5	Excerpts from WQCC Statement of Reasons for the 2005 amendments to 20.6.4 NMAC
NMED Exhibit 6	Statement of Reasons approving the 2010 ONRW designation of all perennial waters within U.S. Forest Service Wilderness Areas, WQCC 10-01 (R)
NMED Exhibit 7	20.6.4.7(B) NMAC - Best Management Practices
NMED Exhibit 8	20.6.4.8 NMAC - Antidegradation Policy and Implementation Plan
NMED Exhibit 9	20.6.4.9 NMAC - Outstanding National Resource Waters
NMED Exhibit 10	Section 101(a) of the federal Clean Water Act (CWA)

NMED Exhibit 11	40 C.F.R. § 131.12
NMED Exhibit 12	Data Dictionary
NMED Exhibit 13	Excerpts from 2018-2020 CWA §303(d)/§305(b) Integrated List
NMED Exhibit 14	20.1.6.201 and 20.1.6.202 NMAC
NMED Exhibit 15	Proposed Amendment Language
NMED Exhibit 16	Written Rebuttal testimony of Jennifer Fullam
NMED Exhibit 17	Written Rebuttal testimony of Diana Aranda
NMED Exhibit 18	Upper Pecos HUC Map
NMED Exhibit 19	2005 Nomination of waters of the Valle Vidal as ONRWs, WQCC 05-04 (R)
NMED Exhibit 20	Direct Testimony of Marcy Leavitt, WQCC 05-04 (R)
NMED Exhibit 21	Direct Testimony of Marcy Leavitt, WQCC 10-01 (R)
NMED Exhibit 22	Excerpt from Order and Statement of Reasons for Amendment of Standards, 2008 Triennial Review, WQCC 08-13 (R)

The Department reserves the right to introduce and move for admission of any other exhibit(s) prior to or at the hearing.

Respectfully submitted,

NEW MEXICO ENVIRONMENT DEPARTMENT
OFFICE OF GENERAL COUNSEL

By: __*/s/ John Verheul*__

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *New Mexico Environment Department's Notice of Intent to Present Technical Testimony* was filed with the WQCC Administrator and served on the following via electronic mail on March 24, 2021:

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF PROPOSED AMENDMENTS TO 20.6.4.9 NMAC DESIGNATION OF WATERS OF THE UPPER PECOS WATERSHED AS OUTSTANDING NATIONAL RESOURCE WATERS

No. WQCC 20-18(R)

REBUTTAL TESTIMONY OF JENNIFER FULLAM

I. INTRODUCTION

My name is Jennifer Fullam. I am employed as the Standards, Planning and Reporting Team Supervisor and serve as the Water Quality Standards Coordinator with the New Mexico Environment Department ("Department") Surface Water Quality Bureau ("SWQB") and have been in this capacity for four years as of March 27, 2021. My resume has been provided as **NMED Exhibit 1** in the Department's Notice of Intent to Present Technical Testimony filed on March 10, 2021. My rebuttal testimony focuses on the direct testimonies of the Petitioner's technical witnesses, Gayle Killam (Petitioners' Exhibit 3) and Robert Sivinski (Petitioners' Exhibit 13). Ms. Aranda's rebuttal testimony (**NMED Exhibit 17**) addresses the technical testimony of President Adelo of the Upper Pecos Watershed Association; Mr. Vigil, Owner of Molino de la Isla Organics LLC, in Pecos, New Mexico; and Mr. Maktima, senior guide at High Desert Angler in Santa Fe, New Mexico. The non-technical testimony submitted by the Honorable Second Lieutenant Governor Mora of the Pueblo of Jemez; the Honorable Mayor Benavidez of the Village of Pecos; President of the New Mexico Acequia Association, Paula Garcia; and County Commissioner and Vice-Chair of the San Miguel County Commission, Janice Varela were all reviewed and commented upon where appropriate in Ms. Aranda's rebuttal testimony.

II. DIRECT TESTIMONY OF GAYLE KILLAM – PETITIONERS' EXHIBIT 3

Summary of Testimony

Page 5 of Ms. Killam's testimony states that "[t]hese proceedings resulted in one waterbody, the Rio Santa Barbara (including tributaries)…being designated as ONRWs."

Department's Rebuttal Response

There were four specified waters that were designated in the Rio Santa Barbara rulemaking. It is important to clarify that the designation is not listed as the Rio Santa Barbara, including all undefined tributaries, but rather the Rio Santa Barbara, including (specifically) the West Fork, East Fork and Middle Fork. The designation in 20.6.4.9(D)(1) NMAC clearly specifies each of the tributaries that are designated as Outstanding National Resource Waters ("ONRWs").

Summary of Testimony

Ms. Killam's testimony states that two of the three prior proceedings designating ONRWs were done so based on an overall geographic area which was all encompassing of the waters within that designated areas. These were for the waters within the U.S. Forest Service's Valle Vidal Special Management Unit and the waters within the U.S. Forest Service's congressionally designated Wilderness Areas. Killam states that "The 2005 Valle Vidal special management unit ONRW designation includes all surface waters – including all perennial, intermittent, and ephemeral waters and all wetlands in the geographic area of the Valle Vidal, and the 2010 U.S. Forest Service Wilderness Area ONRW designation includes all named perennial surface waters and all mapped wetlands in all U.S. Forest Service [W]ilderness [A]reas in New Mexico."

Department's Rebuttal Response

The Department rebuts the assertion that either the Valle Vidal or the U.S. Forest Service Wilderness Area matters serve as precedent for designating ONRWs on a watershed-based level.

In neither of the matters Ms. Killam's testimony references were "all waters of the State" included, but rather all *listed* waters. As the administrative record clearly indicates, the Commission designated ONRWs within the Valle Vidal and Wilderness Areas based on a specified listing of qualified tributaries. This is supported by the testimony and administrative record for these matters, where each tributary that was designated was adopted as listed in 20.6.4.9 NMAC.

As discussed in my direct testimony (**NMED Exhibit 2**), the testimony and Statement of Reasons on the matter regarding the 2010 designation of waters within the U.S. Forest Service Wilderness Areas clearly identifies only listed perennial waters, not all waters. Evidence of this is found on page 5 and 6 of the direct testimony of Marcy Leavitt in WQCC 10-01 (**NMED Exhibit 21**), in the matter to nominate surface waters in the Forest Service Wilderness as ONRWs, where Ms. Leavitt's testimony specifically identifies those waters nominated. The specific waters being considered were also reflected in several maps for each of the Wilderness Areas, depicting the upstream and downstream boundaries for each of the tributaries being nominated. The Commission's Statement of Reasons approving the designation (**NMED Exhibit 6**) recognized the regulations, as written, support designating multiple waters within a Wilderness Area as ONRWs as a single action, however the action was clearly limited in its designation to those waters identified, as required by 20.6.4.9(A)(1) NMAC. Page 5 of the Commission's Statement of Reasoning approving the designation (**NMED Exhibit 6**) discusses the Department's declaration that the nomination was limited in scope to those identified and other waters not identified, even if these waters met the criteria, were required to undergo the full rulemaking process to be designated. As such, only the listed perennial waters and wetlands within the U.S. Forest Service designated Wilderness Areas are designated as ONRWs.

As it pertains to the Valle Vidal ONRW designation, page 1 of the direct testimony of Marcy Leavitt (**NMED Exhibit 20**) clearly identifies the waters being nominated as ONRWs. The testimony thereon refers to "waters of the Valle Vidal" but, provided Ms. Leavitt's clear delineation of what waters those are, identifies that this action was not inclusive of all surface waters of the State, as defined in 20.6.4.7(S)(5) NMAC, within the Valle Vidal, but rather all waters as provided in the petition and supporting testimony that are within the Valle Vidal. This is reflected throughout the supporting evidence used for the 2005 "Nomination of the Waters of the Valle Vidal as Outstanding National Resource Water[s]" ("nomination") (**NMED Exhibit 19**). The following is a list of some of the sections of the nomination where such specificity is provided.

The map on page 5, provided in part as one of the submittals required by 20.6.4.9(A)(1) NMAC, depicts a base map with all tributaries in and outside the Valle Vidal, but it specifically delineates the tributaries to which the ONRW designation was being considered including: Rio Costilla, La Cueva, Comanche Creek Fernandez, Chuckwagon, Little Costilla Creek, Holman Cree, Gold Creek, La Belle Creek, Grassy Creek, Upper Comanche, Vidal Creek, Powderhouse Creek, Middle Ponil, Shuree Ponds, McCrystal Creek Sealy Canyon, North Ponil and Greenwood Canyon.

In Section 2, pages 6 and 7, the nomination provides support for the designation of the Middle Ponil, McCrystal, North Ponil, Rio Costilla, La Cueva, Powderhouse, Chuckwagon, Comanche Creek, Foreman, Gold, Grassy, Holman, La Belle, Little Costilla and Vidal based on special designation eligibility, consisting of evidence that these specific tributaries are receiving protection similar to Wild and Scenic Rivers. There is further discussion in the nomination regarding recreational and ecological significance, and although these sections do not specifically

list the waters, the focus is on recreation in and on waters with access to fishing. Similarly, the evidence regarding ecological significance speaks of the ecological community in and around the Valle Vidal but does not discuss specific waters.

In addition to the Map and Section 2, in Section 3 the nomination provides information necessary to establish baseline water quality, as required by 20.6.4.9(A)(3) NMAC. Water quality data was provided for Leandro Creek, McCrystal Creek, Middle Ponil Creek, North Ponil Creek, Seally Canyon, Shuree Pond North, Shuree Pond South, Comanche Cree (Costilla to Little Costilla), Costilla Creek (Comanche to Costilla Dam), and Comanche Creek Tributaries. This is similar to the information provided to establish existing uses, to which ONRW protections are based on. The existing use data are provided in Appendix 3; specifically, Table 3-2. This table specifically lists the existing uses for the Middle Ponil Creek, North Ponil Creek, Ponil Creek, Comanche Creek, Upper Comanche Creek, and Costilla Creek.

This is further elaborated upon in Appendix 1, which provides stream descriptions for each of the nominated waters which include the Rio Costilla, Comanche Creek, Powderhouse Creek, La Cueva Creek, Middle Ponil Creek, and Leandro Creek.

It should be further noted that the use of the term "waters of the Valle Vidal" appears to be limited to those listed perennial waters, as the nomination does not use the term "intermittent" and only uses to the term "wetland" once, on page 10, as it describes the many types of ecosystems found within the Valle Vidal. Likewise, the term "ephemeral" is only used on page 10 to describe the presence of a rare fairy shrimp that was found in the area; on page 27, where it describes the sources of waters to the North Ponil drainages; and on page 29, where it is established that there are some waters within the Valle Vidal that do not have fish.

This is then directly reflected in the Commission's approval of the ONRW designations which delineates upstream and downstream boundaries of the Rio Costilla, Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Powderhouse, Holman, Gold, Grassy, La Belle, Vidal, Middle Ponil Creek Greenwood Canyon, Shuree Lakes, North Ponil Creek, McCrystal, Seally Canyon Creek and Leandro Creek.

The Department therefore rebuts the assertion that the 2005 Valle Vidal ONRW designation provides precedent for the Commission to designate ONRWs on a watershed basis. That conclusion is not obvious to the Department based upon our review of the Valle Vidal record. Although the nomination does discuss the overall importance of the Valle Vidal as a whole, there is supporting evidence for the ONRW designation that focuses specifically on each named tributary. These waters, with their upstream and downstream boundaries, are reflected in the adopted rule, 20.6.4.9(D)(2) NMAC.

In further support of the limited scope of the Valle Vidal rulemaking, there was a later request for the Commission to include a single named tributary, Powderhouse Creek, for ONRW designation within the Valle Vidal, based on an inadvertent oversight which omitted the listing in the original rulemaking. The Commission designated this tributary as an ONRW, with clear language on page 20 in the Statement of Reasons (**NMED Exhibit 22**) that inclusion of this tributary was "in no way intended to set a policy by the Commission for future ONRW petitions."

Summary of Testimony

Ms. Killam's direct testimony, on page 5, states that "[t]o date, three nomination proceedings have occurred in New Mexico. These proceedings resulted in one waterbody, the Rio Santa Barbara (including tributaries), and two geographic areas – which encompass all the waters, including wetlands, of the Valle Vidal and the perennial waters and wetlands within all federally-

designated U.S. Forest Service Wilderness Areas – being designated as ONRWs."

Department's Rebuttal Response

The Department rebuts the statement that the proceedings resulted in the designation of all waters, including wetlands of the Valle Vidal and the perennial waters and wetlands within all federally designated U.S. Forest Service Wilderness Areas. The language adopted by the Commission on each of the three matters designating ONRWs specifically identifies those waters which were designated. 20.6.4.9(D) NMAC.

The only wetlands that were adopted, as part of the designation for specified waters within the U.S. Forest Service Wilderness Areas are those specifically identified in the testimony and exhibits brought forth on the matter during the public hearing and adopted in 20.6.4.9(D)(3) NMAC through reference to a document identified as "Maps and List of Wetlands within United States Forest Service Wilderness Areas Designated as Outstanding National Resource Waters" which is published and filed with the New Mexico State Library. Likewise, there is no language in the nomination or supporting testimony to support the designation, the Commission's Order and Statement of Reasons, or in the language adopted for designation of wetlands in the Valle Vidal.

Summary of Testimony

Ms. Killam's testimony uses the term "watershed" throughout.

Department's Rebuttal Response

The term "watershed" is commonly used when discussing river systems, however there are various ways in which a watershed is defined and with what degree of resolution. Watersheds can be defined on various scales of resolution, but they are always based on physical topographical features on the landscape and how that landscape directs the physical movement of water to areas of lower elevation. Features are usually characterized by mountain ridges, hills or other physical

barriers. To be more specific, the U.S. Geological Survey ("USGS") describes geographically connected water drainage areas by scale with "region" being the largest hydrologic unit code ("HUC"), "subregion", "basin", "subbasin", "watershed" and "subwatershed" being progressively more defined. The USGS classifications are developed through modelling of elevational profiling to define these hydrologically connected systems. As such, the USGS HUC system is widely used in the field of hydrology as it is based on defensible and widely accepted modelling practices.

As it pertains to the USGS Cow Creek-Pecos River watershed (HUC 1306000102), which is associated with the waters in this nomination, the watershed's southern extent is at the Pecos River with its confluence with Tecolote Creek, near Interstate 25 (I-25), north through the town of Pecos and beyond the U.S. Forest Service Wilderness Area boundary. This watershed is well beyond the proposed area being considered for ONRW designation. The Department attempted to determine the hydrologic "watershed" for the area delineated under the demonstration, however it does not align with any USGS watershed or subwatershed HUCs. The use of the term "watershed" without reference, scale, or physical topographical delineation appears to be ambiguous. The Department suggests Petitioners provide a description of how the term "watershed" is defined for this ONRW nomination.

Summary of Testimony

Page 8 of Ms. Killam's testimony states that "[d]esignating all surface waters within the watershed is necessary to fully protect the whole of the watershed, its riparian habitat, and the exceptional values these waters hold and that form the basis of this nomination."

Department's Rebuttal Response

The Department suggests Petitioners define the phrase "exceptional values." As used in Ms. Killam's testimony, it is unclear what this is referring to as it pertains to the eligibility criteria

for these waters as ONRWs. As provided in the direct testimony of Ms. Aranda (**NMED Exhibit 4**), the Department found there was satisfactory evidence provided for exceptional ecological and recreational significance for some waters, however neither the nomination nor Ms. Killam's testimony provides evidence of exceptional ecological and recreational significance for all ephemeral, intermittent, perennial waters (including wetlands).

Summary of Testimony

Page 8 of Ms. Killam's testimony states that "[a]ll of these waters, taken together, form a unique and important ecosystem that supports significant recreational opportunities in New Mexico."

Department's Rebuttal Response

The Department concurs that ecosystems are a conglomerate of physical and biological conditions within a geographic area that work as an interconnected system. The Department also concurs that the area being considered for designation as an ONRW from Dalton Creek day use area north to the Wilderness boundary is within the much larger sedimentary mid-elevation forest ecoregion within the southern rocky mountain range. However, the Department finds the use of the term "unique" is unsupported, as is the assertion that the ecosystem in and of itself supports significant recreational opportunities for all tributaries being nominated.

Summary of Testimony

Page 9 of Ms. Killam's testimony states that "[t]he 2005 Valle Vidal special management unit ONRW designation includes all surface waters – including all perennial, intermittent, and ephemeral waters and all wetlands in the geographic area of the Valle Vidal…"

Department's Rebuttal Response

The Department rebuts the addition of the word "all" and the assertion that the designation includes "*all* perennial, intermittent, and ephemeral waters and all wetlands in the geographic area of the Valle Vidal" (emphasis added) as this language is not found or implied anywhere in the record or in the designation of named waters, codified in 20.6.4.9(D)(2) NMAC.

Summary of Testimony

Ms. Killam's testimony states that "[t]he 2010 U.S. Forest Service [W]ilderness [A]rea ONRW designation includes all named perennial surface waters and all mapped wetlands in all U.S. Forest Service [W]ilderness [A]reas in New Mexico."

Department's Rebuttal Response

The Department rebuts the assertion that "all named perennial surface waters" were included in the ONRW designation for U.S Forest Service Wilderness Areas, as the designation was only for the identified named perennial surface waters. The language in 20.6.4.9(D)(3) NMAC states (emphasis added) "*the named perennial surface waters of the state, **identified in Subparagraph (a) below***, located within United States [D]epartment of [A]griculture [F]orest [S]ervice [W]ilderness…"; clarifying it is only those waters listed that are designated as ONRWs. In addition, as it pertains to wetlands, the language in 20.6.4.9(D)(3)(h) NMAC only provides ONRW designation to those wetlands identified on the "*Maps and List of Wetlands Within United States Forest Service Wilderness Areas Designated as Outstanding National Resource Waters."*

The Commission's Order and Statement of Reasons from WQCC 10-01(R) (**NMED Exhibit 6**) states "Petitioners' amended petition nominated specifically identified perennial waters, lakes, and wetlands within twelve United States Forest Service Wilderness Areas as ONRWs. Tr. vol. 7, p. 1899, 11. 8-9. The amended petition included approximately: (a) 700 miles of 195 perennial rivers and streams; (b) 29 lakes; (c) 4,930 acres of 1,405 wetlands. Tr. vol. 1, p. 40, 11.

12-16. that the designation for these waters is limited to those listed and should any future waters be identified; they would need to undergo the full rulemaking process." The Department therefore rebuts assertions that the waters designated as ONRWs within the U.S. Forest Service Wilderness Area include "all surface waters of the State", as the Department does not find this is supported by the record from either proceeding.

Summary of Testimony

Page 9 of Ms. Killam's testimony states that the Upper Pecos Watershed nomination follows a similar approach to those taken for the Valle Vidal and U.S. Forest Service Wilderness Area designations.

Department's Rebuttal Response

The Department rebuts this assertion as there is evidence the designations for all prior ONRW designations provided delineation of the waters being nominated and included upstream and downstream boundaries with clear evidence based on scientific principles demonstrating the eligibility for such a designation. In addition, the regulations only provide for one "geographically" based eligibility criterion (20.6.4.9(B)(1) NMAC) for waters that are physically located in a specifically listed designated geographical area such as a designated Wilderness Area state or national park, monument or wildlife refuge. The Department supports the designation for those waters that are designated as Wild and Scenic Rivers and have been identified by the N.M. Department of Fish and Game as "special trout waters" as these waters are delineated and meet particular geographical eligibility criteria identified in 20.6.4.9(B)(1) NMAC. In addition to these waters, the Department also supports an overall designation of 16 waterbodies identified in the Upper Pecos nomination, totaling 70.2 stream miles, for which sufficient evidence was provided for such designation. *See* **NMED Exhibit 4**, **NMED Exhibit 15**.

Summary of Testimony

Page 9 of Ms. Killam's testimony states "[w]ith this landscape- scale nomination, ONRW protections can be most clearly communicated to the public and interested parties. This is especially true in connection with the adjacent [W]ilderness ONRW designation of the Upper Pecos headwaters."

Department's Rebuttal Response

By encompassing numerous undefined tributaries with undefined water quality, the Department finds it difficult to understand how the public was adequately informed of the protections afforded to each of these independent waters, which would each need to be evaluated to see if they meet the criteria of 20.6.4.9(B) NMAC for designation as an ONRW.

All surface waters of the State have designated uses as provided in 20.6.4.97 to 20.6.4.899 NMAC. In accordance with 40 C.F.R. 131.3, EPA's Water Quality Standards Academy Online Key Concepts Module 2: Use (https://www.epa.gov/wqs-tech/key-concepts-module-2-use), and the definition in 20.6.4.7(D)(3) NMAC, designated uses are goals for the water, specified in a water quality standard, that support Section 101(a)(2) of the federal Clean Water Act, whether or not they are being attained. These uses can vary but all surface waters of the state identified in 20.6.4.97 to 20.6.4.899 NMAC have protections for aquatic life uses, recreational uses, livestock watering and wildlife uses. These uses are not the same for all waters as they are based on evidence for what is believed to be the highest attainable use for that water. Some waters, based on stream type, location, and elevation can attain aquatic life uses that support aquatic life adapted to cold water, while others may only be able to attain water quality that supports warmwater species. In addition to protecting water quality for designated uses, the State's antidegradation policy also protects the existing uses for all waters of the State. These are the uses, to which the water quality

has been the most stringent anytime since 1975. These protections are for all waters, regardless of ONRW designation.

Summary of Testimony

Page 9 of Ms. Killam's testimony states that "[c]onsistent protections and requirements within the region will likely result in a greater understanding of measures to be undertaken and better compliance."

Department's Rebuttal Response

All surface waters of the State are protected under the same antidegradation policy, as found in 20.6.4.8 NMAC. Those waters designated as ONRWs only differ from other waters of the State as it pertains to the implementation of the antidegradation policy, providing less flexibility for the introduction of pollutants. The Department also suggests Petitioners clarify this statement regarding "understanding of measures to be undertaken" and "better compliance", since the designation of a water as an ONRW does not regulate activities or compliance.

Summary of Testimony

Page 10 of Ms. Killam's testimony provides evidence that the scientific basis for a large-scale application of ONRWs is to addresses ecosystem processes through the three planes of influence which include longitudinally, laterally, and vertically.

Department's Rebuttal Response

All surface waters of the State, regardless of ONRW designation, have designated uses for protection of aquatic life and wildlife, based on what is believed to be the highest attainable use. There are narrative and numeric criteria that protect for those uses and policies that ensure water quality is protected from degradation. The Department rebuts the assertion that it is the designation of these waters as ONRWs that protects the ecosystem as a whole, since the function of an ONRW

designation is strictly limited to the application of a more stringent tier of the antidegradation policy. It is the appropriate designation of uses and the criteria that protect for those uses that functionally support ecosystem health and function.

Summary of Testimony

Page 11 of Ms. Killam's states that "…the inclusion and protection of ephemeral and intermittent streams (named and unnamed) [as ONRWs] preserves the integrity of the watershed. In New Mexico, 88% of the state's streams are either ephemeral or intermittent." The testimony further explains the functionality of ephemeral and intermittent streams within the larger ecosystem, and how that is applicable to the Pecos River.

Department's Rebuttal Response

All surface waters of the state, as defined in 20.6.4.7(S)(4) NMAC, have narrative protections as well as specific numeric protections for wildlife, livestock watering, aquatic life and recreational uses. For all surface waters of the State there are currently over 100 contaminants identified in 20.6.4.900 NMAC which a waterbody may be protected from given the specific designated uses established for that particular waterbody. These include protections for unclassified ephemeral and intermittent waters which have designated uses as identified in 20.6.4.97 and 20.6.4.98 NMAC, respectively. Wetlands, considered surface waters of the State, are also protected as either ephemeral, intermittent, or perennial waters in 20.6.4.97, 20.6.4.98, or 20.6.4.99 NMAC, respectively, with the same applicable numeric criteria that protect for the various uses designated for them. These designated uses and the criteria that protect for those uses are also protective of the ecosystem in general, since a healthy water supports a healthy ecosystem as a whole. In addition, all surface waters of the State are protected from antidegradation under the State's antidegradation policy and implementation plan, which states that, at a minimum all

waters must be protected for their existing use (20.6.4.8 NMAC). The Department agrees that protections are vital for functionality of healthy watersheds but rebuts the assertion that the designation of these waters as ONRWs will provide protections for these waters that are not already in place.

Summary of Testimony

Page 12 of Ms. Killam's testimony asserts that "[b]y protecting the whole Upper Pecos Watershed as an ONRW, New Mexico also protects the integrity of an intact reference watershed, against which other watersheds and sub- watersheds in the state and in other arid southwest states can be compared. Identifying and protecting such reference waters is necessary to establish what 'healthy' watersheds look like and to set the targets for those watersheds in the state that require restoration."

Department's Rebuttal Response

The Department suggests Petitioners provide evidence for this assertion. The Department has reference locations predominately located in the already designated Wilderness Areas. As a whole, neither the "watershed" or any particular tributary has supporting data to declare it as a reference water. In addition, most of the waters nominated have not been assessed, therefore assertions cannot be made on the quality of these waters as a whole. Of the perennial waters that have been assessed, there are four which have been listed as impaired for aquatic life. A reference watershed, in general, has limited to no anthropogenic activity impacting water quality. The area containing the nominated waters is highly utilized for recreation and has had historic mining activity, all compromising its ability to be referenced as an "intact reference watershed." The Department therefore questions the use of the terms "intact", "healthy", and "reference."

Summary of Testimony

Page 14 of Ms. Killam's testimony states that "[t]he Upper Pecos Watershed ONRW nomination is justified because the watershed is beneficial to the State." Pages 14-17 of Ms. Killam's testimony provide additional detail as to how the designation is of benefit to the State, including providing clean water to acequias, and as an attraction for recreational activities which in turn supports local businesses by bringing in millions of dollars to the area.

Department's Rebuttal Response

The Department does not find the evidence supporting this statement. The Petitioner is required to demonstrate to the Commission how the designation of these waters as ONRWs is beneficial to the State based upon the criteria of 20.6.4.9(B) NMAC, not just that the waters or the watershed itself is beneficial. As explained in my direct testimony, **NMED Exhibit 2**, in the Commission's Order and Statement of Reasons from WQCC 10-01 (R) (**NMED Exhibit 6**) this additional requirement was specifically added to prevent allegations of "taking" of protections not otherwise substantiated. It is unclear to the Department how the evidence provided demonstrates the designation of these waters as ONRWs would benefit the State, rather than how these waters, which are already protected by the State's Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC), are providing these benefits.

Summary of Testimony

Page 14 of Ms. Killam's testimony states that "all nominated waters demonstrate both exceptional ecological and recreational significance, more than half of the named waters meet the water quality criterion, and two named waters meet the significant attribute criterion."

Department's Rebuttal Response

The Department did not find supporting evidence demonstrating that the unnamed ephemeral, intermittent, and perennial waters met any of the eligibility criteria. The discussion regarding exceptional ecological or recreational significance beyond other waters was limited in scope to the 16 identified perennial waters the Department has already testified in support of (**NMED Exhibit 4**). The other waters only demonstrated conditions similar to other ecosystems of like nature, not significant or exceptional.

Summary of Testimony

On page 15 of Ms. Killam's testimony, the statistical figures for San Miguel County are provided as evidence supporting the recreational significance of the Upper Pecos "watershed."

Department's Rebuttal Response

The Department finds the data non-specific to the Upper Pecos "watershed" given that there are at least 10 other recreational fishing locations within San Miguel County including Storrie Lake, Villanueva State park McAllister Lake State Park, Gallinas River Recreation Area, Conchas Lake, Monastery Lake, Harris Lake, Bradner Reservoir, Peterson Reservoir and Crystal Lake. In addition, there are countless other perennial tributaries within San Miguel County, and neighboring Santa Fe County, that are also accessible for fishing. The Department found the data associated with San Miguel County to be partially misleading given the Pecos River is more proximal to Santa Fe than to Las Vegas, the most populous city in San Miguel County, and anglers with a license through the New Mexico Department of Game and Fish ("NMDGF") can fish anywhere in the State, so purchases in San Miguel County do not necessarily directly relate to fishing in the Pecos. The Department finds the data presented to be inconclusive for demonstrating exceptional recreational significance specific to the waters being nominated as part of this petition.

Summary of Testimony

Page 16 of Ms. Killam's testimony states that "[s]everal small communities and larger municipalities rely on the water from the Upper Pecos Watershed for drinking and other potable uses, including Santa Fe, Las Vegas, and the Village of Pecos. Watersheds — such as the Upper Pecos — purify the waters that flow from them at no cost to downstream municipalities."

Department's Rebuttal Response

The Department finds this statement unsupported by any evidence. Neither the City of Santa Fe, the City of Las Vegas nor the Village of Pecos obtain drinking water from the Pecos River. Based on information obtained from the Village of Pecos confidence report, drinking water is obtained from two community wells, not the Pecos River. In addition, the City of Las Vegas is several watersheds away and does not obtain drinking water from the Pecos River. The testimony goes on further to state that the watershed purifies the water for consumption, for which no evidence is presented. Domestic drinking water systems are required to treat water, at significant effort and cost, prior to providing to the public for general consumption. Waters that have less contaminant contributions are likely to require less treatment by the drinking water systems, but are not exempt from treatment by any means.

Summary of Testimony

Page 18 of Ms. Killam's testimony states that "[t]he waters of the Upper Pecos are particularly renowned for trout fishing. The entire nominated area falls within a general 'trout water area' according to the NMDGF in its 2019– 2020 Fishing Rules and Information[41] and accompanying map."

Department's Rebuttal Response

A "trout water area" as defined in the referenced rules and information is not the same as the NMDGF's "special trout waters" as referred to by 20.6.4.9(B) NMAC. The "trout water area[s]" include all of north central New Mexico. There are two waters identified as "special trout waters" among the waters being considered for designation as ONRWs, which the Department supports. These include the Pecos River from the confluence with the Rio Mora upstream to the bridge crossing at Cowles and Jack's Creek from the waterfalls located 0.25 miles downstream of N.M. Highway 63 crossing upstream to its headwaters. The definition of a water as "trout water area" is not a listed criterion in 20.6.4.9(B) NMAC for designation of water as an ONRW.

Summary of Testimony

Ms. Killam's testimony provides data obtained from NMDGF "that [show] the nominated sections of the Upper Pecos Watershed contain numerous Species of Economic and Recreational Importance ("SERI"). In July and August 2020, NMDGF conducted a search for SERI for each of the nominated stretches of the watershed." Further, the testimony states "[t]he Petition details a list of federally endangered or threatened species, state endangered or threatened, and special status species that inhabit the nominated area as reported by NMDGF."

Department's Rebuttal Response

The Department finds that there is a limited number of tributaries that the NMDGF data applies to. These include Bear Creek, Carpenter Creek, Dalton Canyon Creek, Doctor Creek, Davis Creek, Holy Ghost Creek, Indian Creek, Jack's Creek, Macho Canyon Creek, Panchuela Creek, Pecos River, Rio Mora, Sawyer Creek, Wild Horse Creek, Willow Creek, and Winsor Creek. Of the tributaries to which the NMDGF provided analysis, the Department has stated

support for designation as ONRWs. However, the list did not include the other unnamed tributaries being nominated.

Summary of Testimony

Page 22 of Ms. Killam's testimony states that "NMDGF currently lists the Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*) as existing along many of the nominated stretches of the Upper Pecos Watershed, including Winsor Creek, Willow Creek, Panchuela Creek, Pecos River, Doctor Creek, Carpenter Creek, Indian Creek, and Jack's Creek."

Department's Rebuttal Response

Evidence provided by the U.S. Department of Agriculture Forest Service's Rare Plants Conservation summary for the Holy Ghost Ipomopsis (*Ipomopsis sancti-spiritus*) as found on https://www.fs.fed.us/wildflowers/Rare_Plants/conservation/success/ipomopsis_sancti-spiritus_recovery.shtml states that "the Holy Ghost ipomopsis is limited to a 2-mile stretch of Holy Ghost Canyon on the Santa Fe National Forest in north-central New Mexico." The U.S. Forest Service does state that there were re-establishment efforts initiated in three unnamed locations (it is unclear if it is within Holy Ghost Canyon or in other tributaries). The Department verified this through the University of New Mexico's rare plants description where it states that the Holy Ghost ipomopsis is found in only one canyon in the upper Pecos River drainage of the southern Sangre de Cristo Mountains.

III. DIRECT TESTIMONY OF ROBERT SIVINSKI – PETITIONERS' EXHIBIT 13

Summary of Testimony

Mr. Sivinski's testimony states it intends to "…address section 20.6.4.9.B.2 NMAC, demonstrating that, in my expert opinion, the nominated waters of the Upper Pecos Watershed

meet the ecological significance criterion warranting designation as Outstanding Waters." Pages 2-9 of the testimony provide information about the various species found in the larger geographical area of Santa Fe, San Miguel, and Mora Counties.

Department's Rebuttal Response

The Department does not rebut the biological diversity of flora and fauna throughout San Miguel, Santa Fe, or Mora Counties, as presented by Mr. Sivinski's testimony; however, the Department found the evidence for "exceptional ecological significance" in comparison to other tributaries in similar ecoregions in the upper Pecos "watershed" to be limited.

Summary of Testimony

Mr. Sivinski's testimony states that "BISON-M identifies 439 species of vertebrate wildlife that use 'arroyo riparian' (a.k.a. ephemeral stream) habitats in the Upper Pecos counties of San Miguel, Santa Fe, and Mora for all or part of their habitat requirements." Mr. Sivinski's testimony evaluates other biological conditions throughout his testimony using the same geographical range. This is found on page 4 of Mr. Sivinski's testimony where it states "Biota Information System of New Mexico (BISON-M) identifies 470 vertebrate, crustacean and mollusk species that use perennial cold water streams, montane riparian forest or ephemeral stream riparian habitats in the Upper Pecos counties of San Miguel, Santa Fe and Mora for all or part of their habitat requirements." References to species diversity over the three counties is again used in the testimony on page 6 where it states the "Biota Information System of New Mexico (BISON-M) identifies 298 bird species that use perennial cold water streams, montane riparian forest or ephemeral stream riparian habitats for at least part of their habitat requirements in the Upper Pecos counties of San Miguel, Santa Fe and Mora."

Department's Rebuttal Response

The Department does not dispute this testimony as it pertains to the number of species utilizing "arroyo riparian habitats" in San Miguel, Santa Fe, and Mora Counties. However, the testimony does not appear to provide evidence that the ephemeral waters in the Upper Pecos area, from the Dalton day use area to the Wilderness Area boundary, demonstrate exceptional ecological significance, in comparison to other like waters.

The Department also notes that the land base being referred to by Mr. Sivinsky's testimony makes up 7% of the overall land base for the State of New Mexico. The landscape and ecological diversity found in these three counties, including the biota that utilize these particular areas, varies greatly. There are at least 18 level IV ecological regions, according to EPA's ecoregional map (https://www.epa.gov/eco-research/level-iii-and-iv-ecoregions-continental-united-states). These include ecological regions for the southern Rocky Mountains; Arizona/New Mexico Plateau, Arizona/New Mexico Mountains, high plains and the southwest tablelands and range from alpine forests to the Rio Grande floodplain and north central New Mexico valleys and mesas to the upper Canadian plateau, the central New Mexico plains and pluvial lake basins. Elevation profile in this 8,556 square mile area ranges from 12,621 feet at the summit of Santa Fe Baldy in Santa Fe County to approximately 3,750 feet in San Miguel county. This is in comparison to the single ecological region found the Upper Pecos "watershed" to which waters being considered for ONRW designation are located, which is characterized as sedimentary mid-elevation forests associated with the southern Rocky Mountains. The Department appreciates the depth of coverage for these areas but does not find the information provides evidence specific to the waters being considered for designation as ONRWs.

Summary of Testimony

Page 3 of Mr. Sivinski's testimony states that the "Santa Fe National Forest chose the insectivorous northern leopard frog (*Lithobates pipiens*), Rio Grande cutthroat trout (*Oncorhynchus clarkii* ssp. *virginalis*), cordilleran flycatcher (*Empidonax occidentalis*) and plumbeous vireo (*Vireo plumbeus*) as its four indicator species to monitor the health of stream/riparian biological communities (USDA-FS 2019)." Page 5 of the testimony further elaborates that the native Rio Grande cutthroat trout "is the official state fish of New Mexico and a remnant native fish of the Upper Pecos and its tributaries. This native fish has been extirpated from about 90 percent of its total historic range. It is now confined to several, but small, populations in the highest reaches of the Pecos headwater creeks."

Department's Rebuttal Response

The Department was unable to verify that the Santa Fe National Forest chose four species to serve as indicator species. The draft Forest Management Plan does not use the term "indicator species" anywhere in its document. The "*Santa Fe National Forest Draft Land Management Plan for Rio Arriba, San Miguel, Sandoval, Santa Fe, Mora and Los Alamos Counties, New Mexico*" (available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd654154.pdf) does not use the term "indicator species" anywhere, and states that these species are "focal" species for all areas in the plan, which will be used to determine the management impacts. These species were identified given they have been identified as "at-risk." In addition, BISON-M indicates that the plumbeous vireo (*Vireo plumbeus*) is uncommon in San Miguel and Santa Fe Counties but is common in Rio Arriba and Sandoval Counties.

As it pertains to the northern leopard frog (*Lithobates pipiens*), BISON-M does not show that there have been extant populations in San Miguel County. There is some indication that the

species may have historically been found in Storrie Lake in San Miguel County, but no other records of its presence in the county were noted. So, although being monitored for as part of the plan, it is more likely to be observed in other counties and watersheds than the one being nominated for ONRW designation. In Christman's "Investigation of the current distribution of the Northern Leopard Frog (*Lithobates [=Rana] pipiens)* in New Mexico 2009-2010*"* (available at http://www.bison-m.org/documents/24155_SwW10ChristmanFnl.pdf), *L. pipiens* was found to be extant in a few locations in San Juan County, Rio Arriba County, Mora County, Colfax County, and Sandoval County. There was a historic specimen of *L. pipiens* that was collected in 1929 at the "Pecos River camp, Pecos." However, the proximity to the area containing the waters nominated for ONRW designation could not be determined; a specimen collected on the Pecos river northwest of San Ysidro; and a report of an observation in 2010 in Villanueva, which could not be verified. The observations in San Ysidro and Villanueva are much further south than the area containing the waters nominated for ONRW designation. The Department does not rebut the findings of Mr. Sivinski's testimony, but as it pertains to *L. pipiens* the Department does not find sufficient evidence that this species is extant in the upper reaches of the Pecos river and the tributaries which are being considered for ONRW designation.

As it pertains to the cordilleran flycatcher (*Empidonax occidentalis*), also commonly known as the western flycatcher, BISON-M indicates this migratory species is common in San Miguel County in spring and summer and less common in the fall, coinciding with its migratory behavior. This migratory species is protected under the federal Migratory Bird Treaty Act, but is considered secure in its population and distribution. The Department finds that this species would likely be common throughout San Miguel County, including the area containing the nominated waters. However, the Department did not find evidence indicating that this species is limited in

range or provides the "exceptional ecological significance" necessary for designation as an ONRW.

As it pertains to the Rio Grande cutthroat trout (*Oncorhynchus clarkii* ssp. *virginalis*), BISON-M indicates that this species should be used as an indicator species for the Rio Grande National Forest and is classified by New Mexico as "Threatened" due to habitat destruction, overfishing, hybridization, and competition with non-native fish. It was included in 2007 on the U.S. Forest Service Region 3's sensitive species list. This species is found in the Pecos drainage which includes the main stem of the Pecos river and Rito Azul; Rito de los Chimayosos; Rito Maestas; Rito del Padre; Rito Valdez; Bear Creek; Macho Creek; Dalton Creek; and Apache Creek. The Rito Azul, Rito de los Chimayosos, Rito Maestas, Rito del Padre, Rito Valdez, and Apache Creek which are all within the U.S. Forest Service Wilderness Area and are already designated as ONRWs, and are beyond the geographical area containing the nominated waters. The Department supports the designation of Bear Creek, Macho Creek, Dalton Creek, and Apache Creek as part of this nomination which is further supported by the evidence presented in Mr. Sivinski's testimony.

Summary of Testimony

Page 3 of Mr. Sivinski's testimony states that "[p]erennial and intermittent stream sides with riparian vegetation comprise a small percentage of the Pecos watershed area but are widespread and provide habitat for a disproportionate number of animal species."

Department's Rebuttal Response

The Department does not disagree with this statement; however, the statement is not supported by evidence demonstrating the intermittent waters provide "exceptional ecological significance" as required by 20.6.4.9(B)(2) NMAC.

Summary of Testimony

Page 4 of Mr. Sivinski's testimony states that "[t]hree experimental introductions of the Holy Ghost ipomopsis have been made into Indian Creek, Panchuela Creek and Winsor Creek canyons, but have not yet demonstrated the feasibility of moving this endangered plant to another location."

Department's Rebuttal Response

The Department supports designating Indian Creek, Panchuela Creek, and Winsor Creek as ONRWs.

Summary of Testimony

Page 4 of Mr. Sivinski's testimony states that "[t]he Pecos fleabane (*Erigeron subglaber*) grows only on the summit of Elk Mountain and a little further north along that ridge."

Department's Rebuttal Response

Elk Mountain is located in a different watershed approximately six linear miles ("as the crow flies") east of the area containing the nominated waters. For that reason, the Department does not find this statement relevant to the whether the waters in the upper Pecos from Dalton Canyon day use area to the Wilderness boundary are of exceptional ecological significance.

Summary of Testimony

Page 5 of Mr. Sivinski's testimony states that the "Arizona willow (*Salix arizonica*) is a rare high elevation shrub that grows only in montane wet meadows and stream sides or the Four-Corners states. Santa Fe National Forest lists it as a sensitive species because of its rarity and severe browsing by livestock and elk. The Upper Pecos population of Arizona willow is entirely dependent on wet meadows along small tributary streams where it co-occurs with Rio Grande cutthroat trout."

Department's Rebuttal Response

The Department does not rebut Sivinski's testimony that the species is sensitive. However, based on the information provided on the New Mexico Rare Plants website (https://nmrareplants.unm.edu/node/160), this species is only extant in Mora, Taos, and Rio Arriba Counties and is not found within the upper Pecos, from Dalton Canyon day use area to the Wilderness Area boundary. The Department therefore disagrees that this provides evidence of exceptional ecological significance as it pertains to the nominated waters.

Summary of Testimony

Page 5 of Mr. Sivinski's testimony states that the "[p]lant Conservation Strategy (EMNRD-Forestry Division. 2017) identifies the entire Pecos River headwaters as an outstanding Important Plant Areas of New Mexico because of this concentration of rare, endemic, and endangered plant species."

Department's Rebuttal Response

The Department rebuts the claim that the 2017 "New Mexico Rare Plant Conservation Strategy" identifies the "entire Pecos River headwaters as outstanding Important Plant Areas of New Mexico." The Department was unable to access the referenced document (the link in Petitioners' Exhibit 13 was invalid) but was able to locate the document at http://www.emnrd.state.nm.us/SFD/documents/NM%20Rare%20Plant%20Conservation%20Strategy_03202019.pdf. The word "Pecos" is only used three times in the referenced document. The first is in reference to a picture of the Pecos sunflower (*Helianthus paradoxus*), while the other two references are in the tables identifying important plant area names, both of which in the lower Pecos near Roswell, New Mexico.

Summary of Testimony

Page 6 of Mr. Sivinski's testimony states that the white sucker (*Catostomus commersoni*) is "another native fish in the tributaries of the Upper Pecos. Dietary habits for both cutthroat trout and sucker are predominantly aquatic invertebrates that proliferate in these cold water streams (Sublete et al 1990). Recent introductions of non-native fish, especially rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*), have converted the fish community in most of the Upper Pecos to these exotic species, which are now the backbone of the local sport fishery."

Department's Rebuttal Response

The Department does not rebut the assertion that the white sucker (*Catostomus commersoni*) may be found in the Pecos Headwaters (USGS Subbasin HUC 13060001) which spans from Sumner Reservoir near Ft. Sumner to the headwaters in the Pecos Wilderness Area, including the tributaries in and around Las Vegas. However, this does not appear to represent sufficient evidence of exceptional ecological significance as it pertains to the nominated waters. Designation of these waters as ONRWs would only impart enhanced protections as it pertains to the State's antidegradation policy on water quality and would not prohibit the management of game populations in these tributaries given that such management would not affect water quality.

Summary of Testimony

Page 7 of Mr. Sivinski's testimony states that "[b]eaver dams increase total water surface area, stabilize and delay stream flows, trap sediment and raise the level of alluvial aquifers. As ponds behind beaver dams fill, new nesting, feeding and thermal habitat for aquatic invertebrates, amphibians, fish, riparian birds and other mammals is created (NMDGF)."

Department's Rebuttal Response

The Department does not rebut that the habitat conducive for the American Beaver (*Castor canadensis*) would include the perennial tributaries being considered as part of this ONRW nomination. However, as clarified earlier in this rebuttal testimony, the designation of these waters as ONRWs only imparts enhanced protections as it pertains to the State's antidegradation policy on water quality and would not result in change in the management of biota in these tributaries.

Summary of Testimony

Page 7 of Mr. Sivinski's testimony states that states that "[b]oth masked shrew (*Otisorex cinereus*) and western water shrew (*Otisorex navigator*) occur in the wetlands of this watershed and are listed as sensitive species by the Santa Fe National Forest."

Department's Rebuttal Response

The Department does not rebut the description of the habitat preferred by the masked shrew (*Otisorex cinereus*). However, BISON-M elaborates further to say that the masked shrew is "confined to the Sangre de Cristo, Jemez, and San Juan mountains, where the animals seem to be restricted to hydrosphere communities, usually above 9,500 feet." The elevational profile along the Pecos River ranges from 7,200 feet at the Dalton day use area to approximately 8,200 feet in Cowles. The Department recognizes there are higher elevations than found on the main stem of the Pecos River, however, this example is to illustrate that the area being nominated for designation as an ONRW generally has lower elevations than the habitat preferred by this species. The Department does not find this evidence demonstrates exceptional ecological and recreational significance for the waters nominated for ONRW designation.

Summary of Testimony

Page 8 of Mr. Sivinski's testimony states that "[s]easonal flows in ephemeral streams recharge alluvial aquifers that in some cases surface in semi-permanent seeps as intermittent streams. These shallow alluvial aquifers place groundwater within reach of many wetland trees and shrubs, which contribute to the productivity and biodiversity of the river system and its riparian network." Page 9 of Mr. Sivinski's testimony states that "[s]prings, ephemeral, intermittent and perennial stream wetlands are all ecologically important to the Upper Pecos Watershed and should be protected by whatever policy or statutory tools are available."

Department's Rebuttal Response

The Department does not find that this statement provides supporting evidence that these waters are of "exceptional ecological significance" as required by 20.6.4.9(B)(2) NMAC. All waters of the State are already protected under the State's Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC) and are functional in providing these benefits.

IV. CONCLUSIONS

The Department concurs with the findings of evidence supporting the designation of 16 identified waters (**NMED Exhibit 15**). The Department reiterates that all waters of the State have protective designated uses, criteria that protect for those uses and an antidegradation policy which protects all waters of the State (including ephemeral, intermittent, perennial and wetlands) from degradation of the existing uses. Existing uses being those uses, to which at any point, the water has been able to attain, whether it is the designated use, or it is currently attaining the use. With these protections, regardless of ONRW designation, activities that may impact a downstream water's designation or antidegradation protections must also be taken into consideration, ensuring the goal and objectives under Section 101(a)(2) of the federal Clean Water Act are being met.

Overall, there is evidence supporting the designation of a limited number of defined tributaries within the Upper Pecos "watershed" area. The Department supports the designation of listed waters as provided in **NMED Exhibit 15**.

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF PROPOSED AMENDMENTS TO 20.6.4.9 NMAC DESIGNATION OF WATERS OF THE UPPER PECOS WATERSHED AS OUTSTANDING NATIONAL RESOURCE WATERS

No. WQCC 20-18(R)

REBUTTAL TESTIMONY OF DIANA ARANDA

I. INTRODUCTION

My name is Diana Aranda, and I work for the Standards, Planning and Reporting Team as an Environmental Scientist/Specialist-Advanced with the New Mexico Environment Department's ("Department") Surface Water Quality Bureau ("SWQB"), and have held this position for two years since February 2019. My resume is provided as **NMED Exhibit 3** in the Department's Notice of Intent to Present Technical Testimony, filed March 10, 2021. My rebuttal testimony focuses on the Petitioners' Notice of Intent to Submit Technical Testimony, also filed on March 10, 2021.

II. Direct Testimony of President of the Upper Pecos Watershed Association Frank "Pancho" Adelo - Petitioners' Exhibit 7

Summary of Testimony

Mr. Adelo's testimony states that he will address section 20.6.4.9(B) NMAC and demonstrate that the "Upper Pecos Watershed" meets the requirements for an ONRW designation.

Department's Response

The Department did not find a direct discussion of how the "Upper Pecos Watershed" or specific nominated waters which fulfill the criteria in 20.6.4.9(B) NMAC in Mr. Adelo's testimony.

Summary of Testimony

Mr. Adelo's testimony states that the Upper Pecos Watershed Association ("UPWA") has been awarded over 14 awards from Section 319 Grants from the U.S. Environmental Protection Agency, and has received approximately $1.6 million for implementation, public outreach, and restoration work in the watershed.

Department's Response

The Department has verified that the UPWA has received more than $1.9M in grants for 14 projects: 11 are from the Clean Water Act (CWA) Section 319 Grant Program (totaling $1.3M) and 3 have been funded by River Stewardship Program grants (totaling $0.6M); both types of grants are used for implementation, public outreach, and restoration work in the watershed.

Summary of Testimony

Mr. Adelo's testimony provides the definition of the "Upper Pecos Watershed" as U.S. Geological Survey Hydrologic Unit Code 13060001, Pecos Headwaters.

Department's Response

The term and scope of the "Upper Pecos Watershed" is not defined, referenced, or mapped in Petitioners' initial or Amended Petitions. The Department acknowledges that Mr. Adelo has now provided a definition and scope for the "Upper Pecos Watershed" as U.S. Geological Survey (USGS) Hydrologic Unit Code ("HUC") 13060001, Pecos Headwaters. The Department is now

under the understanding that this testimony provides the definition and scope of the "Upper Pecos Watershed" proposed for designation as an Outstanding National Resource Water ("ONRW").

However, this definition has a different scale and scope than the maps provided in pages 9 and 10 of the Amended Petition. The Department has created a map, included as **NMED Exhibit 18**, to depict the contrast in scale between Mr. Adelo's USGS definition and that of the Petition's proposed area. **NMED Exhibit 18** includes: the described "HUC 13060001", the Pecos Wilderness area, and the area of the proposed waterbodies with respect to the defined watershed. The Department suggests that the watershed, as discussed in the Amended Petition, be referred to and cited in a consistent fashion, and that a map representing the waters proposed for designation as ONRWs is created and presented as described in 20.6.4.9(A)(1) NMAC.

Summary of Testimony

Mr. Adelo's testimony describes the outreach efforts taken by the UPWA. The UPWA created online outreach tools for the public to submit letters of support for the ONRW nomination, which generated over 100 letters of support that were forwarded to the Commission. They distributed their outreach information to over 3,000 subscribers. The UPWA hosted two public meetings that were attended by over 200 people. The UPWA members also attended two public meetings in San Miguel County and the Village of Pecos seeking support of the ONRW nominations. At both meetings, the proposed resolution in support was passed.

Department's Response

The Department appreciates the detail provided regarding public outreach. However, the testimony does not provide evidence that the public participation requirements of 40 C.F.R. § 25.6 have been met. *See* 20.6.4.8(B)(9) NMAC ("[t]he department ensures that the provisions for

public participation required by the New Mexico Water Quality Act and the federal Clean Water Act are followed").

Summary of Testimony

Mr. Adelo's testimony provides a narrative of his unique experience growing up in Pecos. He shares his experiences as a landowner, business owner, and as President of the UPWA. The testimony gives a narrative of the benefits that the "Upper Pecos Watershed" provides to New Mexico and visitors to Pecos. His testimony provides a description of landowner status in the area, the flora and fauna, listings of activities, and a list of local businesses.

Department's Response

The Department appreciates Mr. Adelo's invaluable, first-hand knowledge of the area where the nominated waters are located.

III. Direct Testimony of Ralph Vigil - Petitioners' Exhibit 10

Summary of Testimony

Mr. Vigil's testimony states that it will address the requirements of 20.6.4.9(B) NMAC and demonstrate that the "Upper Pecos Watershed" meets the requirements for ONRW designation.

Department's Response

The Department did not find a definition of the "Upper Pecos Watershed" in Mr. Vigil's testimony, nor does the testimony specify which nominated waters fulfill the criteria of 20.6.4.9(B) NMAC.

Summary of Testimony

Mr. Vigil's testimony asserts that the designation as an ONRW will protect and support traditional land uses in the Pecos area, such as irrigation, farming, and ranching, and that the water should not be leveraged for short-term economic gain.

Department's Response

All waters of the State have protections for designated uses, which, at a minimum, include protections for aquatic life, human recreation, livestock watering, and wildlife habitat. Other designated uses for surface waters include domestic water supply, irrigation, and irrigation storage. In accordance with 20.6.4.8 NMAC, the State's antidegradation policy protects designated and existing uses of the State's surface waters, regardless of economic benefit. An ONRW designation does not protect or prohibit any specific use. Instead, it protects the water quality to a higher degree than other waters.

Summary of Testimony

Mr. Vigil's testimony asserts that an ONRW designation will provide protection for local businesses, mitigate recreational and industrial impacts, promote watershed restoration, and build educational projects.

Department's Response

While the benefits described in Mr. Vigil's testimony may be realized directly or indirectly as a result of the increased water quality protections provided by designation as an ONRW, the protections of that designation are limited only to water quality.

Summary of Testimony

Mr. Vigil's testimony provides a description of the acequia communities and their economic and ecological benefits. His testimony emphasizes the importance of connecting "water

policy" to the water quality that the acequia communities depend on, and that ONRW designations and regulations do not "add additional burdens on acequias."

Department's Response

The Department appreciates Mr. Vigil's invaluable, first-hand knowledge of the area where the nominated waters are located.

IV. Direct Testimony of Norman Maktima - Petitioners' Exhibit 12

Summary of Testimony

Mr. Maktima's testimony states that it will address the criteria of 20.6.4.9(B)(2) NMAC, provide a demonstration of how the nominated waters meet these criteria, and discuss how an ONRW designation is beneficial to the State.

Department's Response

Mr. Maktima's testimony provides a qualitative discussion of how much of the Pecos River and "Upper Pecos Watershed" is used by many for recreation.

The Department did not find a discussion of any specific waterbodies, other than the Pecos River, that fulfil the criteria of 20.6.4.9(B)(2) NMAC or how the evidence presented specifically fulfills the criteria. Mr. Maktima's testimony also discusses the nominated waters as the "Upper Pecos Watershed" but does not define the watershed in the context of the specific nominated waters.

Mr. Maktima's testimony does provide evidence of the employment opportunities that outdoor recreational business in the Pecos River and "Upper Pecos Watershed" provide as a benefit to the State.

Summary of Testimony

Mr. Maktima's testimony lists species of aquatic insects that help evaluate the health and quality of the river. It also discusses the biodiversity and ecological significance of the watershed.

Department's Response

Mr. Maktima's statements regarding indicator species and field observations have scientific merit and the Department suggests that these statements include references and citations.

Summary of Testimony

Mr. Maktima's testimony states that designation as an ONRW would "ensure water quality" is maintained.

Department's Response

All surface waters of the state, as defined in 20.6.4.7(S)(5) NMAC, are protected to ensure that the water uses and quality necessary to support their designations are maintained and protected under the Antidegradation Policy and Implementation Plan (20.6.4.8 NMAC).

Summary of Testimony

Mr. Maktima's testimony provides a narrative describing growing up in the Upper Pecos River Valley. It describes his experiences and opportunities that fly-fishing in the Pecos River has provided to him, his Team, recreational businesses, and to visitors. His testimony provides first-hand descriptions and observations while fishing. Mr. Maktima's testimony describes the economic and recreational opportunities the region brings and emphasizes the need to protect the watershed for the benefit of the ecosystem and local economy.

Department's Response

The Department appreciates Mr. Maktima's invaluable, first-hand knowledge of the area where the nominated waters are located.

V. Direct Testimony of the Honorable Second Lieutenant Governor of Jemez Pueblo, Kurt Mora - Petitioners' Exhibit 15

Summary of Testimony

Second Lieutenant Governor Mora's testimony provides a description of the Pueblo of Jemez' historical ties to the Pecos River and ancestral homeland, the sacredness of the water, and the river's connection to its people's health and wellbeing.

Department's Response

The Department appreciates Second Lieutenant Governor Mora's invaluable, first-hand knowledge of the area where the nominated waters are located, and the cultural significance of the waters themselves.

VI. Direct Testimony of County Commissioner for District 2 and Vice-Chair of the San Miguel County Commission, Janice Varela - Petitioners' Exhibit 16

Summary of Testimony

Commissioner Varela's testimony states that it will address the requirements of 20.6.4.9(B) NMAC and provide a demonstration of how the ONRW designation benefits New Mexico.

Department's Response

The Department did not find a discussion of the requirements of 20.6.4.9(B) NMAC in Commissioner Varela's testimony.

Summary of Testimony

Commissioner Varela's testimony states that "by enacting protection of water quality, such as by designating the Upper Pecos Watershed as an Outstanding National Resource Water," it will ensure the future of "our river."

Department's Response

All surface waters of the state, as defined in 20.6.4.7(S)(5) NMAC, are protected to ensure that the instream water uses and quality necessary to support their designations are maintained and protected under the Antidegradation Policy and Implementation Plan (20.6.4.8 NMAC). Water quality protections are enacted independently of an ONRW designation.

Summary of Testimony

Commissioner Varela's testimony lists protected areas within San Miguel County: Las Vegas National Wildlife Refuge, Pecos National Historical Park, and the Santa Fe National Forest.

Department's Response

The nominated waters are neither within nor in close proximity to the Las Vegas National Wildlife Refuge or Pecos National Historical Park; therefore, these management areas do not appear to address the criteria of 20.6.4.9(B) NMAC as it relates to this ONRW nomination.

Summary of Testimony

Commissioner Varela's testimony provides a description of San Miguel County's history, demographics, community, fauna, flora, and recreational opportunities. Her testimony states that the San Miguel County Commission resolution for this ONRW petition passed unanimously. The testimony also provides a narrative of Commissioner Varela's experiences growing up and her hopes for her grandchildren to grow up as she did.

Department's Response

The Department appreciates Commissioner Varela's invaluable, first-hand knowledge of the area where the nominated waters are located.

VII. Direct Testimony of the Honorable Mayor of the Village of Pecos, Telesfor "Ted" Benavidez - Petitioners' Exhibit 18

Summary of Testimony

Mayor Benavidez' testimony states that he will address the requirements of 20.6.4.9(B) NMAC and demonstrate how the designation benefits the State.

Department's Rebuttal Response

The Department did not find a direct discussion of the requirements of 20.6.4.9(B) NMAC in Mayor Benavidez' testimony.

Summary of Testimony

Mayor Benavidez' testimony provides a narrative of his duties as Mayor of the Village of Pecos. The testimony also states that the Pecos Village Administration proudly constructed a $6.5M wastewater treatment facility for the Village. The testimony states how Mayor Benavidez finds the waters of the "Upper Pecos" to be very important for recreation, the economy, and his community.

Department's Response

The Department appreciates Mayor Benavidez' invaluable, first-hand knowledge of the area where the nominated waters are located.

VIII. Direct Testimony of President of the New Mexico Acequia Association, Paula Garcia - Petitioners' Exhibit 19

Summary of Testimony

Ms. Garcia's testimony states that she will address the requirements of 20.6.4.9(B) NMAC and demonstrate how this ONRW designation benefits the State.

Department's Response

The Department did not find a discussion of 20.6.4.9(B) NMAC in Ms. Garcia's testimony.

Summary of Testimony

Ms. Garcia's testimony provides a narrative of her role in the New Mexico Acequia Association and describes the association's mission to conserve and protect the "Upper Pecos River." Her testimony provides the historical importance of acequias and the "cultural knowledge" acequieros have of the Pecos River.

Department's Response

The Department appreciates Ms. Garcia's invaluable, first-hand knowledge of the area where the nominated waters are located.

IX. CONCLUSIONS

The Department has reviewed the witnesses' testimonies (Petitioners' Exhibits 7,10,12,15,16,18 and 19) for Ms. Aranda's rebuttal testimony. Petitioners' Exhibits 7,10,16,18 and 19 generally stated that they would address how the Amended Petition fulfills the criteria of 20.6.4.9(B) NMAC. However, the Department did not find evidence as to how the nominated waters fulfill the criteria of 20.6.4.9(B) NMAC.

The witnesses' testimonies identify the area were the nominated waters are located, or address the nominated waters using various terms. Those terms include: Pecos Valley, Upper Pecos Watershed, Pecos watershed, Pecos Headwaters, this part of the watershed, Pecos River and its tributaries, Upper Pecos region, the Pecos region, Pecos area, the Upper Pecos, Upper Pecos River, mainstem of the Pecos River, Upper Pecos River Valley. Petitioners' Exhibit 7 provides the definition of the "Upper Pecos Watershed" as U.S. Geological Survey Hydrologic Unit Code 13060001, Pecos Headwaters. The Department has provided a map depicting this definition from the Petitioners' Exhibit 7 as **NMED Exhibit 18.** In order to fulfill 20.6.4.9(A)(1) NMAC, the Department suggests the Petitioners provide a clear definition of what they consider a watershed, a clear delineation of the watershed they have proposed for ONRW designation, and a way this watershed delineation may be recreated (for example, a properly scaled U.S. Geological Survey Hydrologic Unit Code).

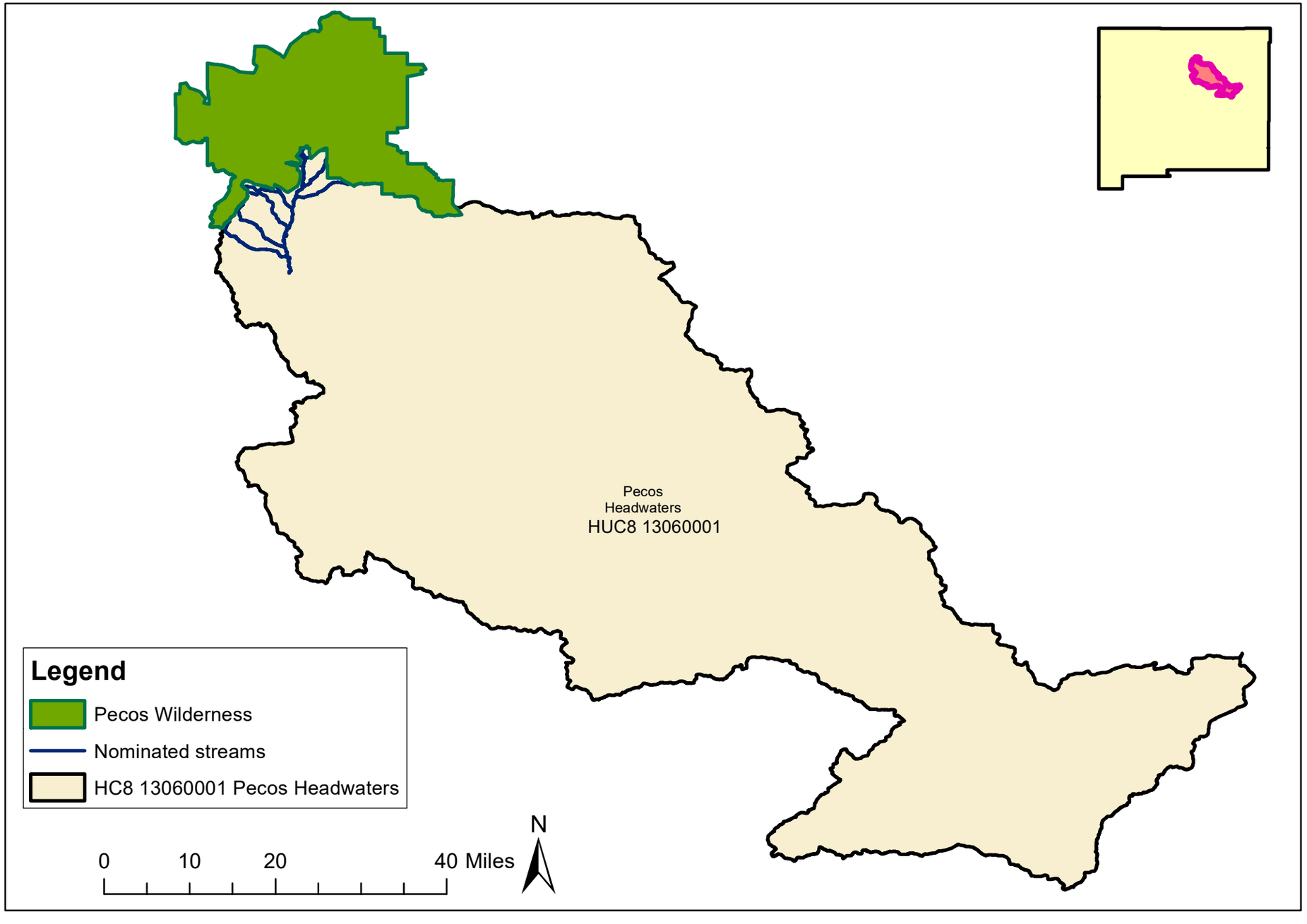
The Department notes that all waters of the State have protected designated uses, existing uses, and criteria that protect those uses under the antidegradation policy. An existing use means a use actually attained in a surface water of the State on or after November 28, 1975, whether or not it is a designated use (20.6.4.7(E)(3) NMAC). With these protections, regardless of ONRW designation, activities that may impact a downstream water's designation or antidegradation protections must also be taken into consideration, ensuring the goal and objectives under Section 101(a)(2) of the federal Clean Water Act are being met.

The Department's assessment of proposed amendments to 20.6.4 NMAC consist of federal and state water quality laws. The Department's review of such proposals is technical in nature. Ultimately, water quality protections and improvements require numeric criteria, defensible baseline data, and science-based management to maintain those goals. The Department recognizes

the value of the traditional, cultural, and ecological knowledge the witnesses have provided in their testimony. The Petitioners' and witnesses' voices are valid and heard, the Department's goal is to aid the vision of a more secure water resources future.

This concludes my rebuttal testimony.

NMED HUC 8 (Subbasin) Pecos Headwaters



NMED Exhibit 18

PUBLIC DISCUSSION DRAFT

NOMINATION OF

THE WATERS OF THE VALLE VIDAL

AS

OUTSTANDING NATIONAL RESOURCE WATER

New Mexico Department of Game and Fish,
New Mexico Environment Department - Surface Water Quality Bureau,
and
New Mexico Energy Minerals and Natural Resources Department - State Forestry

JULY 2005

Executive Summary

The Valle Vidal is one of New Mexico's most prized areas for those individuals that appreciate the splendor of the outdoors. Donated to the people of the United States by the Pennzoil Corporation in 1982, the area is now managed by the U.S.D.A. Forest Service. Trophy elk hunting, fly fishing, horseback riding, hiking, bird watching, and cross country skiing are among the activities for which the Valle Vidal is famous.

Water is the lifeblood of the area's wildlife populations, terrestrial and aquatic. The headwater streams of the Valle Vidal flow into two major drainages, the Rio Grande and South Canadian. New Mexico's state fish, the Rio Grande cutthroat trout, occupies waters on both slopes of the Valle Vidal. Other native and introduced fish species also call the waters of the Valle Vidal home, attracting anglers from around the country. The woodlands support herds of elk and deer as well as a diversity of bird life.

The large meadows of the western portions of Valle Vidal contain the meandering Comanche Creek and its many tributaries, eventually flowing into the Rio Costilla, which flows through the west side of the Valle Vidal into the Rio Grande. The east side of the Valle Vidal contains streams that flow into the South Canadian and eventually the Arkansas River. The headwaters of Middle Ponil, McCrystal, North Ponil, Leandro, and Seally Canyon creeks are all contained within the boundaries of the Valle Vidal. Shuree Lakes discharge into Middle Ponil Creek and are a popular destination for many visitors to the Valle Vidal.

The partners propose to nominate all waters of the Valle Vidal under authority of the New Mexico Water Quality Act and New Mexico Administrative Code (20.6.4.9 NMAC) as Outstanding National Resource Water (ONRW). ONRWs are waters that possess outstanding ecological or recreational values. This designation would provide further incentive to maintain the quality of these waters into the future for the benefit of both humans and wildlife. Designation as an ONRW helps ensure that water quality is maintained or improved from the point in time of designation to protect water quality for existing uses. ONRW designation would not limit existing uses as long as these uses do not degrade water quality from the levels at the time of designation.

Protection of ONRWs is recognized under New Mexico water quality standards - antidegradation policy (Paragraph 3, Subsection A of 20.6.4.8 NMAC [New Mexico Administrative Code]), that states no degradation shall be allowed in high quality waters designated by the commission as ONRWs. This policy is supported by the

implementation plan (20.6.4.8.B NMAC), which encourages best management practices within watersheds to reduce or abate sources of water pollutants.

Many waters of the Valle Vidal are eligible for protection as Wild and Scenic under the federal Wild and Scenic Rivers Act. They directly support an outstanding trout fishery that is visited by over 5,000 anglers annually. New Mexico's largest elk herd roams the watersheds drained by the streams of the Valle Vidal. Numerous hunters, scouts, campers, and others who benefit from the pristine qualities of these streams and lakes also utilize these areas.

High water quality adds to the large variety of wildlife and plants, including several sensitive and unique species that inhabit the Valle Vidal. Though some stream segments on the Valle Vidal do not currently meet the requirements for their designated use as "cold water fishery," many groups and individuals have been working proactively to improve the condition of these waters for recreation and wildlife.

There are several ongoing and potential activities that might contribute to a reduction of water quality in the future. Ongoing activities include livestock grazing, recreation, roads, invasive plants and their control, fisheries management, and fire. Current activities are carefully monitored through cooperation of the U.S. Forest Service, New Mexico State Forestry, and New Mexico Department of Game and Fish. Proactive and well-planned management is not expected to create permanent reductions in water quality.

Nomination of the waters of the Valle Vidal as ONRW may help guide the approval process for future activities that would affect water quality. Potential activities that could impact water quality in the future include the possibility that the area may be developed for logging or oil and gas. These activities have the potential to decrease water quality through sedimentation from road building and high use of forest roads by maintenance trucks, depletion of groundwater levels, and discharge of water and extraction-derived pollutants produced in oil or gas pumping. Though this development may provide short-term economic gains, it is likely that many of the existing local industries would be negatively and permanently affected by this development. Existing industries are based around providing services for individuals wishing to recreate on the Valle Vidal including hunters, anglers, wildlife watchers, and others just wishing to experience the grandeur of the area.

The New Mexico Department of Game and Fish, New Mexico Environment Department – Surface Water Quality Bureau, and New Mexico State Forestry believe that designation of the waters of the Valle Vidal as ONRWs will help conserve the existing conditions and the special qualities of the Valle Vidal into the future. With appropriate management this area can continue to be a gem within New Mexico's borders, providing the opportunity for many to visit and enjoy the recreational opportunities that exist there as well as providing habitat for large numbers of wildlife species including New Mexico's state fish, the Rio Grande cutthroat trout.

Petition for the waters of the Valle Vidal as an ONRW

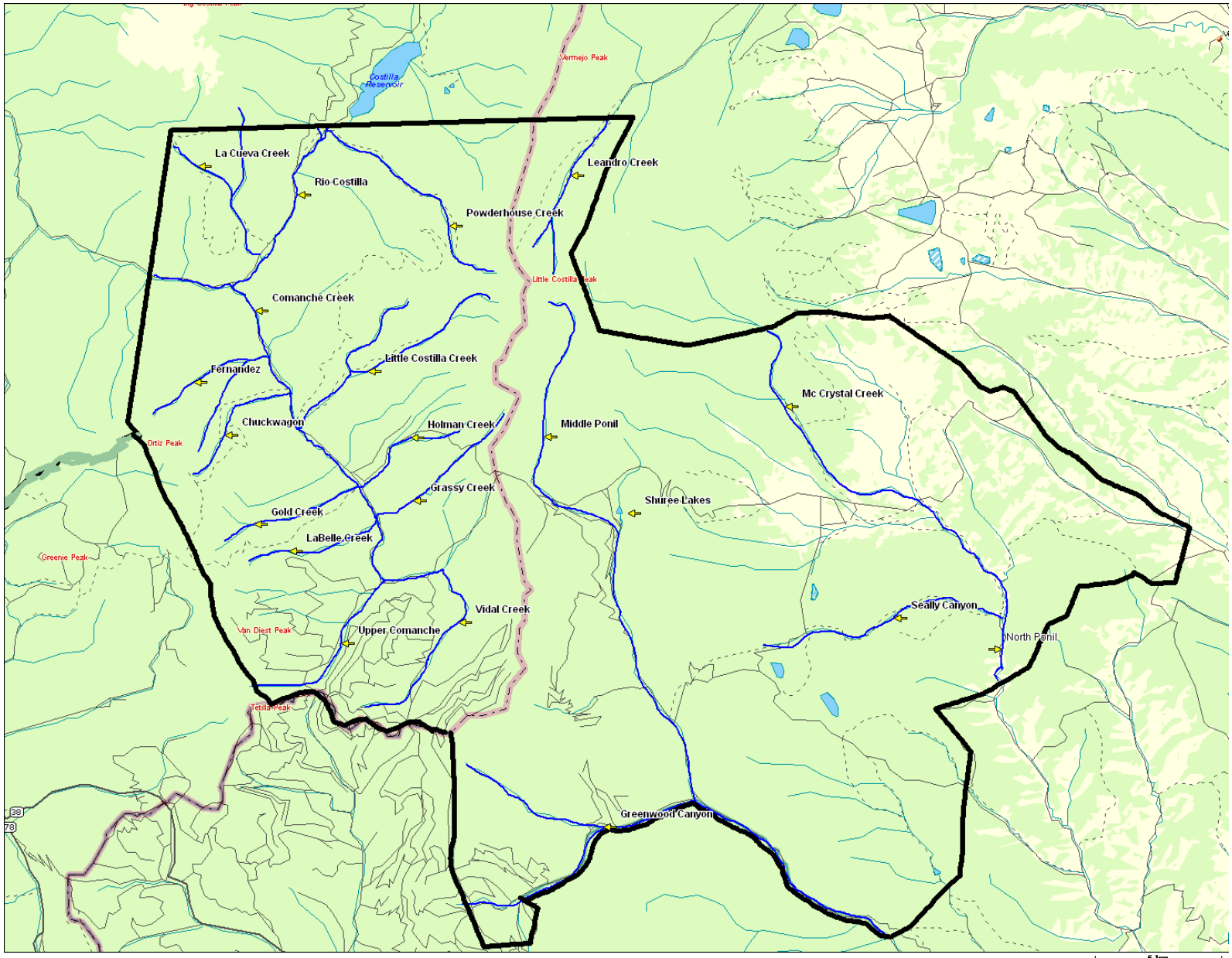
20.6.4.9 NMAC (State of New Mexico Standards for Interstate and Intrastate Surface Waters)

A. Procedures for nominating an ONRW
   1. Map
   2. Written statement based on scientific principles ONRW criteria listed in Subsection B
   3. Water quality data for baseline
   4. Discussion of activities that might contribute to reduction of water quality in the proposed ONRW
   5. Any additional evidence to substantiate designation, including an analysis of the economic impact of the designation on the local and regional economy within the state of NM.
   6. Affidavit of publication of notice

B. Criteria for ONRWs
   1. The water is a significant attribute of a state gold medal trout fishery, roadless area, national or state park, national or state monument, national or state wildlife refuge or designated wilderness area, or is part of a designated wild river under the federal Wild and Scenic Rivers Act –or-
   2. The water has exceptional recreational or ecological significance –or-
   3. The existing water quality is equal to or better than the numeric criteria for protection of aquatic life uses, recreational uses, and human health uses, and the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource.

Section 1. Map of Valle Vidal.

All the waters encompassed in the 100,000-acre Valle Vidal Wildlife Management Unit of the Carson National Forest (Valle Vidal) are proposed for designation as Outstanding National Resource Waters (ONRW). The Valle Vidal (located in Colfax and Taos counties of northeastern New Mexico) has three main drainages: Rio Costilla, Middle Ponil, and North Ponil creeks. Additionally, the Valle Vidal contains the headwaters of Leandro Creek, which flows to the Vermejo River. Permanently watered streams (high-lightened in blue on following map) are more common in western than eastern portions of Valle Vidal. The Pennzoil Company donated the Valle Vidal to the American people in 1982. It is now administered as a special unit by the Questa District of Carson National Forest.


Costilla Reservoir
Vermejo Peak
La Cueva Creek
Rio Costilla
Leandro Creek
Powderhouse Creek
Little Costilla Peak
Comanche Creek
Little Costilla Creek
Fernandez
Mc Crystal Creek
Chuckwagon
Holman Creek
Middle Ponil
Ortiz Peak
Grassy Creek
Shuree Lakes
Gold Creek
LaBelle Creek
Greenie Peak
Vidal Creek
Seally Canyon
Van Diest Peak
Upper Comanche
North Ponil
Tetilla Peak
Greenwood Canyon
38
78
5 km
© 2001 DeLorme. Topo USA® 3.0
Scale: 1 : 125,000 Zoom Level: 10-6 Datum: NAD27 Map Rotation: 0° Magnetic Declination: 10.0°E

Section 2. Support for designation of Valle Vidal as ONRW.

1. Significant attributes of water

The Valle Vidal is one of New Mexico's most scenic landscapes. The lush valleys of the Valle Vidal were formed by the collapse of an ancient volcanic crater. New Mexico Magazine touts the Valle Vidal as one of the highlight areas for outdoor recreation in New Mexico, Great Outdoor Recreation Pages (GORP) list the Valle Vidal as one of the ten best camping areas in the country, stating that it "is a special treasure to those who want to experience the west as it once was." During summer months, the Valle Vidal is popular among anglers, wildlife watchers, hikers, and others wishing to take in its splendor. Winter months provide opportunities for snowmobiling, snowshoeing, and cross-country skiing.

The Valle Vidal is part of the Carson National Forest, and is managed as a special wildlife area, containing many large roadless areas. The Valle Vidal boasts some of northern New Mexico's best aquatic resources. The Valle Vidal includes several waters, which have sufficient values to classify them under the federal government's Wild and Scenic Rivers program (Table 1). McCrystal Creek has been determined to be eligible based on its remarkable fish (Rio Grande cutthroat trout), wildlife, scenery, as well as recreational and ecological values. The entire drainage, including the North Ponil is determined to have remarkable historic value. Middle Ponil Creek is outstanding for its wildlife, historic, and recreational values. Additionally, the entire Rio Costilla drainage, including Powderhouse, La Cueva Creek, as well as Comanche Creek and its tributaries, are eligible to be classified as "wild, scenic or recreational" under the Wild and Scenic Rivers Act.

These rivers receive protection as if they were designated Wild and Scenic. Therefore, they must be managed to maintain and, to the extent possible, enhance their outstanding values. Management and development of the rivers cannot be modified to the degree that eligibility or classification would be affected.[1]

[1] Carson Forest Plan Amendment 12, Protection of Eligible Wild, Scenic, or Recreational River Areas, Carson National Forest, Taos County, NM.

Table 1. Eligibility of Valle Vidal waters under the federal Wild and Scenic Rivers Act.

Drainage	Water Name	Wild and Scenic Classification
Middle Ponil	Middle Ponil	Recreation
North Ponil	McCrystal	Recreation
North Ponil	North Ponil	Wild
Rio Costilla	Rio Costilla	Recreation
Rio Costilla	La Cueva	Scenic
Rio Costilla	Powderhouse	Wild
Rio Costilla (Comanche)	Chuckwagon	Wild
Rio Costilla (Comanche)	Comanche Creek	Recreation
Rio Costilla (Comanche)	Foreman	Wild
Rio Costilla (Comanche)	Gold	Wild
Rio Costilla (Comanche)	Grassy	Scenic
Rio Costilla (Comanche)	Holman	Recreation
Rio Costilla (Comanche)	La Belle	Recreation
Rio Costilla (Comanche)	Little Costilla	Wild
Rio Costilla (Comanche)	Vidal	Wild

2. Recreational or ecological significance:

2.1 Recreational significance

Whether one comes to the Valle Vidal Unit of the Carson National Forest to hunt, fish, or hike, this is one of the great recreational experiences available in New Mexico, if not the nation. The Valle Vidal was one of the first national forest units in the state where resource managers agreed to maintain quality elk herds as well as a quality hunting experience. License numbers were kept intentionally low to provide the public the opportunity to locate trophy-sized bulls typically not found on more intensively hunted public lands.

From the start, it also was managed as a once-in-a-lifetime hunting opportunity, an effort to provide more hunters the opportunity to experience this beautiful mountainous area. In addition, closures occur on portions of the Valle Vidal during winter (January 1 to March 31) and spring calving (May 1 to June 30) to protect the elk. Legally licensed elk hunters

may also hunt for bear during their seasons and there are also twenty permits available to hunt wild turkey.

For anglers, the waters of the Valle Vidal offer the chance to catch the Rio Grande cutthroat trout *(Oncorhynchus clarki virginalis)*, as well as brown trout (*Salmo trutta)*, rainbow trout (*O. mykiss)* and brook trout (*Salvelinus fontinalis)*. Since 1997, an average of 5,000 anglers have visited the Valle Vidal, fishing 15,000 days each year. Rio Costilla (Costilla Creek) and Shuree Lakes are the most visited destinations. In keeping with the spirit of maintaining a quality angling experience, fishing is not allowed on the Valle Vidal until July 1.

Rainbow trout are stocked in the ponds of Shuree Lakes, which have a bag limit of two fish 15 inches or larger. One of the ponds is designated as a "kids pond" for anglers under 12 years of age. All stream fishing is catch-and-release. By providing both opportunities for keeping large stocked trout and catch-and-release fishing for wild fish in streams, the Valle Vidal attracts a diverse group of anglers. Characteristics of individual streams included in this nomination are presented in Appendix 1.

"The Valle Vidal is still one of the few easy access public fisheries that's good enough to guide on," writes author and fishing guide Taylor Streit. "It's every man's stream, not just because there are lots of fish, but the gentle nature of the meadows make it perfect for both young and old. I've even had handicapped people catch fish there."

Camping is a popular activity in the Valle Vidal. To help protect the Valle Vidal from impacts of camping, it is restricted to campground areas or away from roads for those choosing to pack into the backcountry. Great Outdoor Recreation Pages voted two campgrounds, Cimarron and McCrystal, among the top ten best U.S. Campgrounds.

Scouts from around the nation and several foreign countries visiting the Philmont Scout Ranch have been using the Valle Vidal to teach Leave No Trace skills. Since 1998, more than 23,000 participants have had a portion of their trek on the Valle Vidal. As well, several camps are used to teach young people a variety of interesting skills from astronomy to the rich history of the Valle Vidal area. A letter from Philmont Scout Ranch is appended, describing their use and value of the wilderness experience for their scouts on the Valle Vidal (Appendix 4).

Separate cross-country skiing/snowshoeing and snowmobiling areas are designated on the west side of the Valle Vidal. Opening of winter recreational areas usually coincides with the migration of the elk herd to the east side. In summer, the wide-open valleys of the Valle Vidal provide great places for hiking and horseback riding for all skill levels.

The streams, lakes, meadows, woodlands, and forests of the Valle Vidal also provide excellent bird watching opportunities, and the area is an important destination for both resident and out-of-state birders. The value of the Valle Vidal to nesting, migrating and wintering birds, as well as the area's attractiveness for bird watching is enhanced by the pristine nature of the surroundings. Within the Valle Vidal, birders can expect to find species typical of the Southern Rocky Mountains, including Bald Eagle (*Haliaeetus leucocephalus)*, Peregrine Falcon (*Falco peregrinus anatum)*, Northern Goshawk (*Accipiter gentiles)*, Three-toed Woodpecker (*Picoides tridactylus dorsalis*), American Dipper (*Cinclus mexicanus unicolor*), Grace's Warbler (*Dendroica graciae graciae*), Western Tanager (*Piranga ludoviciana*), Green-tailed Towhee (*Pipilo chlorurus*), and Red Crossbill (*Loxia curvirostra*).

2.2 Ecological significance

The Valle Vidal supports a large variety of wildlife species (Appendix 2, tables 2-1 and 2-2). There are several threatened or sensitive species that are found on the Valle Vidal as well as the largest elk herd in the state. Although the area is not classified as a wilderness area, there are a limited number of open roads and many of these have seasonal closures, affording wildlife a great deal of protection from human traffic.

All of the main drainages contain populations of Rio Grande cutthroat trout, the state fish of New Mexico. The Rio Grande cutthroat trout is currently found in less than 10 percent of its native range in the watersheds of New Mexico and Colorado. Rio Grande cutthroat trout is listed as a species of concern by the U.S. Fish and Wildlife Service, New Mexico Department of Game and Fish, and Region 3 of the U.S. Forest Service. The Rio Grande cutthroat trout is currently under litigation to be considered a "candidate" species for federal listing under the Endangered Species Act. All of the waters contained on the Valle Vidal are suitable and historical, Rio Grande cutthroat trout habitat. Comanche, Leandro, McCrystal, and Powderhouse creeks all contain Rio Grande cutthroat trout populations that have high levels of genetic purity (NMDGF 2002). The entire Rio Costilla drainage is proposed for restoration for Rio Grande cutthroat trout. Other native fishes that currently occur in the waters of the Valle Vidal include creek chub (*Semotilus atromaculatus*) and longnose dace (*Rhinichthys cataractae*).

There are several amphibians, mammals, and birds, listed as sensitive or threatened species that are found on the Valle Vidal (Appendix 2). Northern leopard frogs (*Rana pipiens)* are listed as a Region 3 U. S. Forest Service sensitive species and also have been documented in the Valle Vidal. Mammals that are dependent on maintenance of streams with high water quality include the little brown myotis bat (*Myotis lucifugus)*, long-eared myotis bat (*Myotis evotis)*, fringed myotis bat (*Myotis thysanodes)*, long-legged myotis bat (*Myotis volans)*, Western small-footed myotis bat (*Myotis ciliolabrum)*, and heather vole (*Phenacomys intermedius)*. Bald eagles (*Haliaeetus leucocephalus)* are also known to utilize the waters of the Valle Vidal.

Additionally, rare aquatic invertebrates, such as Knobbedlip fairy shrimp (*Eubranchipus bundyi*) and Packard's fairy shrimp (*Branchinecta packardi)*, have been found in several ephemeral waters on the Valle Vidal. The Packard's fairy shrimp is known from only two other sites in New Mexico; El Malpais and Mount Taylor.

Plant communities on Valle Vidal are a diverse assemblage of forest, mountain meadow, wetland, and alpine tundra vegetation typical of the southern Rocky Mountain floristic region. Lower elevation forests are dominated by ponderosa pine (*Pinus ponderosa*) while mid-elevations have mixed conifer forests of ponderosa pine, limber pine (*Pinus flexilis*), Douglas fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), blue spruce (*Picea pungens*), and large glades of aspen (*Populus tremuloides*). The highest forested elevations are covered with subalpine forests of corkbark fir (*Abies arizonica*), Engelmann spruce (*Picea engelmannii*), and bristlecone pine (*Pinus aristata*).

Several stands of bristlecone pine on Valle Vidal are considered old-growth for that species. In fact, a bristlecone pine tree on the south flank of Little Costilla Peak is one of the largest known trees of this species in the world. There are two co-champion bristlecone pines on the Big Tree Register – one on Valle Vidal and another of similar size in adjacent Colfax County.

Alpine tundra and mountain meadow plant communities are relatively rare in the mountains of northern New Mexico. Tundra vegetation on Valle Vidal is confined to a small area at the highest elevations of Little Costilla Peak. However, the mountain meadows of Valle Vidal range from small forest openings to extensive fescue grasslands that contribute significantly to scenic views and the wildlife species that depend on these open habitats.

Riparian woodlands and wet meadows are also rare in New Mexico. These are especially diverse plant communities that provide clean water by slowing and filtering runoff. Woody vegetation along Valle Vidal streams range from narrowleaf cottonwood (*Populus angustifolia*) and willows (*Salix* sp.) to mountain alder (*Alnus incana*) and red-osier dogwood (*Cornus sericea*) at higher elevations. Numerous springs and seeps produce wet meadow cienegas and bogs dominated by various native sedges (*Carex* sp.), grasses, and a diverse array of other herbaceous plants that create unique and productive wildlife habitats.

3. Existing Water Quality.

The Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department has monitored and assessed the streams on the Valle Vidal over the last 16 years. These data are summarized in Appendix 3. A large majority of these assessments indicate the waters are at or above the applicable standards, i.e. are meeting their designated uses. However, some of the streams do not currently meet their designated uses (Table 2). Appendix 3, Table 3-2 lists the exceedence ratios, the number of times a parameter exceeded the standard over the total number of times that parameter was measured. For most parameters the exceedence ratio must be 0.15 for the segment to be listed as not supporting the designated use.

Several pro-active projects, by several organizations, to improve these streams and riparian habitats have been undertaken. Currently the Comanche Creek working group includes individuals from the Quivira Coalition, New Mexico Department of Game and Fish, Carson National Forest, and New Mexico Environment Department as well as the current grazing permittee for the Valle Vidal. A Watershed Implementation Plan for the Comanche Creek Watershed, funded by a 319 grant from the EPA, provides the outline of projects to improve water quality in Comanche Creek.

Section 3: Baseline Water Quality Data.

The New Mexico Environment Department (NMED) has monitored water quality at 7 sites within the boundaries of the Valle Vidal, as well as several sites at downstream locations (Appendix 3, Table 3-1). Sites in the Ponil Watershed were monitored 7 times in 1989 and again in 1998 (Appendix 3, Table 3-4). The Costilla Watershed was surveyed 2 to 4 times a year between 1986 and 1995 and 8 times in 2000 (Appendix 3, Table 3-3 and Figures 3-1 and 3-2). Thermographs were also deployed in Comanche Creek in 2002 and 2003 to record diurnal and seasonal variations in temperature. Thermographs were placed at Comanche Creek below the elk exclosure between May 18 and October 23 of 2002 and at Comanche Creek above the confluence with Rio Costilla between July 2 and September 4 of 2003 (Appendix 3, Figure 3-3).

Water quality monitoring included measurement of a number of chemical and physical parameters including: dissolved oxygen (DO), temperature, pH, turbidity, total nitrogen (TN), total phosphorus (TP), and dissolved metals such as aluminum, zinc and lead. These parameters are then compared to applicable standards to determine if the waters are meeting their designated uses. Stream bottom deposits are assessed to determine the percent of fine substrate (sand and fiber) from a geomorphic survey, benthic macroinvertebrate surveys, and comparing these variables to those from a reference site. The reference should be minimally disturbed and have characteristics such as elevation, geology, hydrology, hydraulics, watershed size, in-stream habitat (pools, substrate, etc), and riparian vegetation similar with the study site.

As Comanche Creek is one of the waters of the Valle Vidal not currently meeting designated uses (Table 2), there are projects underway to improve its condition. A Watershed Implementation Plan for the Comanche Creek Watershed, funded by a 319 grant from the EPA, provides the outline of projects designed to improve water quality in Comanche Creek.

The following is a brief overview of recent results of water quality surveys on the streams of the Valle Vidal.

Rio Costilla Basin**:**
From May through October 2002 Comanche Creek thermograph recorded temperatures higher than 23˚C, which are in excess of those required to support the designated use of the high quality cold water fisheries. Geomorphic and benthic macroinvertebrate data, however, indicated full support for the designated use.

Eight water quality samples collected from Costilla Creek below the reservoir from May through October 2000 indicated that a small proportion of the samples had exceedences for aluminum, lead, nickel, and zinc. None, however, was persistent enough to result in an assessment of nonsupport of the designated use. Below the Valle Vidal boundary, the turbidity requirement was exceeded for the spring samples.

Middle Ponil:
From May 1998 through March 1999, Middle Ponil Creek had exceedences for turbidity indicating a slight impairment to the high quality cold-water fishery designated use. In the summer of 2002, a nearly 100,000-acre fire burned through much of the Middle Ponil drainage below Greenwood Canyon. It is likely that ash flows from this event caused dramatic changes to water quality in the lower portions of Middle Ponil Creek.

North Ponil:
From May 1998 through March 1999, North Ponil Creek had exceedences for turbidity and phosphorus, indicating a slight impairment to the high quality cold-water fishery designated use. McCrystal Creek, a tributary to North Ponil Creek, assessed in 1999, had temperatures in excess of the requirements for the high quality cold-water fishery designated use.

Other Valle Vidal Waters:
Leandro Creek and Seally Canyon were assessed in 1998 and met all designated use requirements.

Table 2: Current classification of Valle Vidal waters for their designated use categories as identified by NMED.

		Designated Uses										
Drainage	**Water Name**	**Domestic Water Supply**	**Fish Culture**	**High Quality Cold Water Fishery**	**Industrial Water Supply**	**Irrigation**	**Livestock Watering**	**Municipal Water Supply**	**Secondary Contact**	**Wildlife Habitat**	**Probable Source of Impairment**	**Specific Impairments**
Vermejo	**Leandro Creek**	Fully Supporting		Fully Supporting	Fully Supporting	Fully Supporting	Not Assessed	Fully Supporting	Not Assessed	Fully Supporting		
Ponil	**McCrystal Creek**	Fully Supporting		Not Supporting	Fully Supporting	Fully Supporting	Not Assessed	Fully Supporting	Not Assessed	Fully Supporting	Loss of Riparian Habitat	Temperature
Ponil	**Middle Ponil Creek**	Fully Supporting		Not Supporting	Fully Supporting	Fully Supporting	Not Assessed	Fully Supporting	Not Assessed	Fully Supporting	Forest Roads, Loss of Riparian Habitat, Rangeland Grazing, Streambank Modifications/destabilization	Sedimentation/ siltation, Temperature, Turbidity
Ponil	**North Ponil Creek**	Fully Supporting		Not Supporting	Fully Supporting	Fully Supporting	Not Assessed	Fully Supporting	Fully Supporting	Fully Supporting	Habitat modification, Loss of Riparian Habitat, Rangeland Grazing, Silviculture Harvesting	Sedimentation/ siltation, Temperature, Turbidity
Ponil	**Seally Canyon**	Fully Supporting		Fully Supporting	Fully Supporting	Fully Supporting	Not Assessed	Fully Supporting	Not Assessed	Fully Supporting		
Ponil	**Shuree Pond (North)**	Not Assessed		Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed		
Ponil	**Shuree Pond (South)**	Not Assessed		Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed		
Costilla	**Comanche Creek (Costilla - Little Costilla)**	Fully Supporting	Fully Supporting	Not Supporting		Fully Supporting	Fully Supporting		Not Assessed	Fully Supporting	Rangeland Grazing	Temperature
Costilla	**Costilla Creek (Comanche to Costilla Dam)**	Fully Supporting	Fully Supporting	Fully Supporting		Fully Supporting	Fully Supporting		Not Assessed	Fully Supporting		
Costilla	**Comanche Creek Tributaries**	Not Assessed		Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed	Not Assessed		

Section 4. Activities that might contribute to the reduction of water quality on the Valle Vidal.

Current Activities:
Protecting the watershed and improving water quality were recognized as challenges for resource management agencies as early as 1983 when the U.S. Forest Service, Vermejo Park Ranch, and the New Mexico Game Commission signed a management directive for Valle Vidal. At that time, riparian habitat was considered "poor." Lack of streambank vegetation contributes to increased sediment loads as well as increased water temperatures.

Grazing
There have been many improvements in grazing management and on-the-ground restoration efforts by several groups to foster recovery of riparian zones.

Currently, range riders discourage cattle from lingering in riparian zones. In addition, grazing exclosures have been placed in many areas to encourage reestablishment of woody riparian vegetation from natural regrowth or plantings have been made by volunteer organizations. Changes in these proactive management practices might have negative effects on water quality and watershed health. Managers will continue to work with permittees to enhance improving trends in water quality of Valle Vidal streams.

Roads and OHV Use
Since 1982, approximately 300 miles of roads have been closed or rerouted to limit their impacts to aquatic systems in the Valle Vidal.[2] Roads and trails are often the main contributor of fine sediments to mountain streams. Additionally, recreation has impacts on riparian vegetation due to trampling by campers and hikers. Currently, regulations on the Valle Vidal prohibit use of vehicles off of established roads and camping is confined to designated-use areas or backcountry camping, at least ½ mile from open roads, 100 yards from natural waters, and 300 yards from artificial impoundments.

Off highway vehicle (OHV) users are one of many groups that appreciate the Valle Vidal for its recreational values. Unfortunately, OHV use, especially illegal and irresponsible use, is an activity that has the potential to contribute to reduction of water quality in the Valle Vidal. Irresponsible motorized use on public lands causes degradation of plant and wildlife habitat; erosion of soils, reduction of plant populations and plant diversity; water and air pollution; damage to cultural resources; and interference with other forms of

[2] Comanche Creek Watershed Implementation Plan – Bionomics Southwest 2003.

recreation.[3] Specifically, OHV use can cause erosion and contribute to increases in conductivity, sediment deposition, and turbidity in water systems. This is especially a risk when OHV users drive in, or up and down the banks of the water body.

OHV use is popular on all open Forest Service roads in the Valle Vidal including the main road through the Valle Vidal (F.R. 1950) and the jeep loop (F.R. 1950, F.R. 1913 and F.R. 1914). Unfortunately, some users choose to stray from these legally designated routes to travel overland and on closed roads and two-track routes. Some stray from designated routes while others gain access from areas outside Valle Vidal. Two examples of illegal access from other Forest Service units include the closed forest service road near Midnight Meadows in the upper Bitter Creek drainage in the Upper Red River area and overland travel from the Anchor mine site, also in the Upper Red River drainage. The Carson National Forest currently has only one OHV enforcement officer for the entire Forest. The large patrol area, as well as extent of OHV abuse Forest wide, makes it difficult for the Forest Service to control problems related to OHV abuse. Fortunately, programs such as the state administered 319 program provide opportunities to help diminish impacts of OHV use. Currently Amigos Bravos, in cooperation with the Forest Service is implementing a 319 project to patrol, control, and mitigate OHV use in the Upper Red River Watershed. Under this project the two problem areas mentioned above are targeted for more effective closure actions and reclamation. To avoid degradation of waters in the Valle Vidal, other projects of this nature could be implemented on Valle Vidal and adjacent Forest Service areas to control potential problems. The Carson National Forest has recognized the problem of irresponsible OHV in the Forest and has recently dedicated substantial resources towards mapping the problem, hosting public meetings, signage and fencing, and working with the public on issues of enforcement.

Best Management Practices (Invasive Plants, Fishery Management, Fire Management)
There are several ongoing and proposed management activities that may cause short-term impacts to water quality, but would have an overall positive effect on health of the watershed and wildlife habitats. The short-term reductions in water quality caused by these management activities should be considered in context of the long- term benefits gained from improved watershed health. Included in these activities are control of invasive species (plant and animal), fisheries management, and fire management.

Controlling invasive and nonnative noxious weeds is a key piece of the Forest Service natural resource agenda for sustaining forests and watershed health. Nationally, invasive species infest 4,600 acres of new land daily[4]. These plant invasions may lower water tables, prevent recovery of disturbed riparian habitat, decrease food available to wildlife and affect food webs[5], alter important ecological processes and resources[6], and lead to

[3] The Wilderness Society, "A Citizen's Guide to Off-Road Vehicle Management and Your Bureau of Land Management Public Lands, April 2002.
[4] Westbrooks, Randy G. Invasive plants: changing the landscape of America: fact book/.-- Washington, D.C.: Federal Interagency Committee for the Management of Noxious and Exotic Weeds, 1998.
[5] Harty, Francis M. 1986. Exotics and their ecological ramifications. Nat. Areas J. 6:20-26.
[6] Melgoza, Graciela, R. S. Nowak and R. J. Tausch. 1990. Soil water exploitation after fire: competition between Bromus tectorum (cheatgrass) and two native species. Oecologia 83:7-13.

endangerment of native species[7,8]. Noxious weeds can disrupt grazing patterns, increase the intensity and frequency of natural fires, lower water tables, and increase soil erosion rates.[9] Noxious weeds are a potential problem to water quality, fisheries, and watershed health, and decrease ecosystem health along rivers and streams. These aggressive alien plants can colonize disturbed areas and prevent succession of native plants, ultimately resulting in slower recovery of disturbed habitat and increased sediment run-off. Riparian shade may also be reduced when native riparian species are replaced with invasive nonnative species.

Proposed activities for invasive plants on Southwestern Region Forests include eradication or control of weeds that pose a threat along riparian areas, roads, trails, recreation sites, administrative sites, gas/oil pads (and pipelines), and range improvements. Areas of recent natural disturbance, such as the Ponil Fire complex and other burned areas will also receive attention. Proposed activities include:

- Hand pulling, grubbing with hand tools or hand-operated power tools, mowing and disking, or plowing with tractor-mounted implements;
- biological control using insects or plant pathogens introduced into the weed habitat;
- controlled grazing using goats and sheep to intensively and repeatedly graze weeds;
- herbicide application to weed populations using hand or vehicle-mounted sprayer applications;
- prescribed burning using limited pile or broadcast burning to eliminate seed heads and resident populations of weeds.

Following invasive plant control elimination efforts, appropriate native species will be restored.[10]

Currently, restoration of Rio Grande cutthroat trout and other native fishes is a high priority for Carson National Forest and New Mexico Department of Game and Fish. Nonnative fish species compete with native species. In addition, several nonnative trout species hybridize with native trout, thereby eliminating the native species. The entire Rio Costilla Drainage, including Comanche Creek, is proposed for restoration of the native fish community. Activities within this project would potentially involve removal of nonnative trout and white sucker by mechanical removal and application of a piscicide to the water. Application of a piscicide would have to be approved by the New Mexico

[7] Parenti, Robert L. and E. O. Guerrant, Jr. 1991. Down but not out: reintroduction of the extirpated Malheur wirelettuce, Stephanomeria malheurensis. Endangered Species Update 8:62-63

[8] Flather, Curtis H.; Linda A. Joyce and Carol A. Bloomgarden. 1994. Species Endangerment Patterns in the United States. USDA Forest Service Rocky Mountain Forest and Range Experiment Station General Technical Report RM-241, Fort Collins, Colorado.

[9] Greater Yellowstone Coalition, Threats to Wildlife, Exotic Plants

[10] Summary of the Draft Environmental Impact Statement for the Environmental Impact Statement for the Invasive Plant Control Project Carson and Santa Fe National Forests in Colfax, Los Alamos, Mora, Rio Arriba, San Miguel, Santa Fe, Sandoval and Taos Counties in New Mexico. USDA Forest Service, Southwestern Region.

Water Quality Control Commission. The Rio Grande cutthroat trout populations in Powderhouse and Leandro Creeks were restored to Rio Grande cutthroat trout with the use of piscicide and mechanical removals.

Wildfire management activities, such as thinning and prescribed burning, increase diversity within the forest and reduce the likelihood of large scale, catastrophic wildfire that could cause long- term degradation in water quality as a result of topsoil loss. Following the Ponil Complex Fire of 2002, the Middle Ponil Drainage experienced large scale flooding and erosion, which eliminated most of the aquatic life in the lower drainage.

Potential Activities:

Oil and Gas Development

The El Paso Corporation has requested authorization from US Forest Service to explore for and develop natural gas resources in the Valle Vidal. At this time, the Carson National Forest is attempting to amend the forest plan to include the Valle Vidal[11]. It is anticipated that after this amendment is completed, an official analysis will be conducted to determine the impacts of oil and gas development, specifically coal bed methane, on the Valle Vidal.

There are several impacts of oil and gas development that can be anticipated to affect water quality and the natural landscape. Their severity depends upon level of development. Currently it is estimated that between 190 and 500 wells will be installed[12]. One of the obvious necessities for installation and maintenance of wells would be construction of additional roads to access them. These roads would likely increase sedimentation in streams. Heavy traffic on these roads will likely cause elevated levels of dust and potential air pollution issues

Well pad site on neighboring Vermejo Park Ranch.

During the oil/gas extraction process, water is pumped from aquifers associated with coal beds. The aquifer must be pumped out ("produced") to cause coal beds to release methane gas. How "produced" water is disposed of as well as its removal will affect how severe impacts may be on water quality and quantity. Water quantity might be diminished in those streams and pond systems that depend on natural springs. There are

[11] Federal Register: 70 FR 34441, June 14, 2005

[12] Power, T. M. 2005, The local economic impacts of natural gas development in Valle Vidal, New Mexico. A report prepared as comment to the Carson National Forest.

several options for "disposal" of water produced during the extraction process. Water can be reinjected into the aquifer, released into natural stream systems, or held in ponds. Often, water associated with this pumping is brackish, high in suspended solids and potentially contains other contaminants.

Coal bed methane extraction is underway in nearby areas. "In Colorado, development of coal bed methane has been underway the longest in La Plata County, including Durango. While the geology there is different than in the Raton Basin, the experiences of La Plata County citizens are instructive regarding the types of environmental impacts that coal bed methane can bring. Along the Fruitland Coal Outcrop, early methane production led to "uncontrolled seeps of flammable and toxic gases, underground coal fires, large-scale vegetation die-off and contamination of groundwater, domestic wells, and homes." [13]

Timber Harvest and Forest Management

Some Valle Vidal forests are suitably mature and accessible for timber harvest. There are, however, no large mills within an economical haul distance to support an extensive cut of this resource. A few small, local mills might be established in the future to harvest small timber leases if this activity is prescribed in the forthcoming Carson National Forest Management Plan. This forest management plan may also prescribe some forest thinning activities to maintain or improve forest health. These activities would create temporary roads and soil disturbance that could increase sediment delivery to streams for a year or two until vegetation is reestablished. Best management practices for erosion control and sediment retention would be applied to these disturbances.

Section 5. Other information regarding ONWR designation for waters of Valle Vidal

Many of the land-based economies of northern New Mexico are based on production of animals: bison, beef cattle, and sheep. Since the 1970s, however, there has been steady growth in the state's land and water based recreation businesses. Those enterprises are often more dependent upon production of fish and wildlife than the traditional products of the livestock industry. The success of this relatively new industry, the fish and wildlife industry, is dependent upon the State of New Mexico maintaining a reputation for unspoiled vistas and abundant wild animals and fish. That budding industry definitely would benefit from designating waters of the Valle Vidal as Outstanding National Resource Waters. The designation would make the area even more marketable than it is.

Clearly, much of the Valle Vidal's appeal comes from the generally undisturbed state of the land and streams in the area. If there were impacts to the scenic and recreational experiences because of degradation of water quality, local businesses that cater to visitors of the Valle Vidal might experience large economic declines. Degradation of water

[13] Draper, Electa. "More wells urged despite woes," The Denver Post, 6/7/00.

quality could impact the quantity and types of wildlife that currently use the area, have negative impacts on angling, as well as impact the scenic quality of streams and lakes on the Valle Vidal.

The U.S. Fish and Wildlife Service estimates that in 2001, over 670,00 individuals participated in wildlife watching activities in New Mexico. Of those, nearly 400,000 were nonresidents who came here to see elk, bears, eagles, turkeys and more than 500 other species of birds that frequent the state[14]. Wildlife watching expenditures statewide were estimated to be $558 million. Fishing had an estimated statewide expenditure of $176 million and hunting contributed another $153 million. The expenditures total roughly a billion dollars annually pumped into the state's economy by people who hunt, fish or watch wildlife. The total impact to the state's economies is a bit less than $2.5 billion.

As one of New Mexico's prime public viewing, fishing, and hunting areas, the Valle Vidal accounts for a substantial portion of this economic activity. The people of New Mexico and the nation who hunt and fish especially value it. They recognize it for the rare opportunity it is, a once-in-a-lifetime chance to pursue one of North America's greatest big game species, the elk, in one of New Mexico's most wonderful locations.

Elk hunting on the Valle Vidal is viewed as exclusive, hunters being limited to one bull and one cow hunt in their lifetime. In the case of archery and muzzleloader hunts, which have an either-sex bag limit, those hunters only get one opportunity to hunt the Valle Vidal. For the 2005 season, 270 permits for a five-day hunt are available (188 NM residents and 82 non-residents).

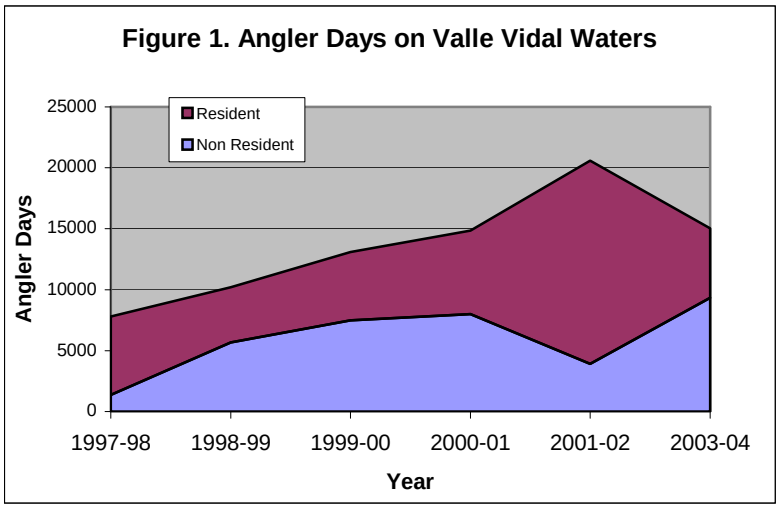
Many residents and nonresidents who initially think they are capable of hunting an area like the Valle Vidal rethink that idea once they see the expanse of this remarkable terrain. A single meadow that can take more than an hour to hike across is not the kind of place where one wants to pack out on ones own back something as large as an 800-pound bull elk. Several commercial outfitting operations exist now on the Valle Vidal. The Carson National Forest reports there are three elk-hunting operators and eight fishing-trip outfitters currently registered to use the property for at least a portion of their business. The New Mexico Council of Guides and Outfitters estimates these 11 businesses alone provide roughly $500,000 to the economic well-being of northern New Mexico.

"We estimate we provide services to roughly 15 percent of all those who draw licenses for the Valle Vidal," said John Boretsky, executive director for the Council. Each hunter using an outfitter pays an average of $4,500 to the outfitter. Boretsky estimates the money paid to elk-hunting outfitters therefore is $206,250.00. As these dollars cycle through the economies of the communities — for wages, groceries, fuel — their impact grows. The Council reports the "multiplier" for outfitted big game hunting is 1.749, meaning the outfitter income has an ultimate impact of $360,731.25[15].

[14] U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.
[15] Economic Contribution of Outdoor Recreation Industry in New Mexico – Professional Hunting Contribution, 2003

The guided hunting trips, however, only represent a portion of the recreational activity on the Valle Vidal. For example, if guided hunters take 15 percent of the 270 permits issued for the area each year, then do-it-yourself residents and nonresidents account for 233 of those licenses. In its 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, the U.S. Fish and Wildlife Service estimated each resident elk hunter spends $108 a day. The average nonresident hunter spends $92 each day.

Assuming that unguided resident hunters account for 215 elk licenses each season, and assuming they hunt four days, the dollars generated by them would be $92,880. The remaining 18 nonresident hunters would contribute $6,624. The multiplier for travel and tourism is typically between 1.5 and 2.5, meaning the true impact of those dollars is somewhere between $149,256 and $248,760[16]. Elk hunting on the Valle Vidal contributes more than a half million dollars to the economies of the communities and individuals surrounding the area.



Much the same can be said for fishing. From 1997-2003, an annual average of 5,000 individuals came to the Valle Vidal and fished 15,000 days. Statewide, NM resident anglers spent $82 each day of fishing and non-resident anglers spent $71, which represents over $1 million spent by anglers fishing on the Valle Vidal.

Business of several local fishing guides are based on fishing Valle Vidal streams. With an average cost of $350.00 a day for a guided fishing trip, Boretsky estimates the immediate dollars contributed by fishing on the Valle Vidal at $87,500. "The multiplier for fishing is 1.54, meaning that industry locally is worth about $134,750" [17] each year.

If development, such as coal bed methane drilling, were allowed on the Valle Vidal, the local community may see short-term gains in economic development. However, many of the jobs require skilled workers that are often filled by gas field workers from other areas[18]. Coal bed methane development can be relatively short-term in duration and often does not provide for long term support of local economic growth, leading to a boom and bust economy for the local community.

[16] Avitourism in Texas, 1999.
[17] Economic Survey for Guided Fishing Along the San Juan River, 2004.
[18] The Local Economic Impacts of Natural Gas Development in Valle Vidal, New Mexico. A report prepared as comments to the Carson National Forest. Thomas Michael Power, Chair – Economics Department, University of Montana. January 2005.

Undoubtedly, the attractiveness of the Valle Vidal for angling, hunting, and other outdoor recreation would be decreased with oil and gas development. It is difficult to project the long-term economic impacts to the local community if income from recreational activities were to decline, but it is not unreasonable to assume they would be substantial and negative.

Section 6. Affidavit of Publication of Notice of the Petition

Appendix 1: Stream Descriptions

Rio Costilla Watershed

Rio Costilla

There are two main sections of the Rio Costilla within the boundaries of Valle Vidal. The main stem of Rio Costilla flows through Costilla Reservoir, which is fully contained within Vermejo Park Ranch, approximately 6 miles through the Valle Vidal, and finally onto Rio Costilla Cooperative Livestock Association (RCCLA) property. Traditionally, water is not released from the reservoir between October and May. During the irrigation season (generally, May-September), flows in the Rio Costilla are highest during the week, when fields are being irrigated.

The Rio Costilla is the most visited water on the Valle Vidal, with an average of 7,700 angler days. Cutthroat trout, rainbow trout, and occasionally brown trout and brook trout can be caught in the Rio Costilla on the Valle Vidal. All fishing is catch and release with artificial flies and lures.

Other fish species that occupy the Rio Costilla include nonnative white sucker and native longnose dace. The mainstem of the Rio Costilla has been proposed for renovation as part of an effort to establish a "metapopulation" of Rio Grande cutthroat trout. This project would include the Rio Costilla and all of its tributaries from headwaters on

Vermejo Park Ranch to Latir Creek on RCCLA, encompassing nearly 200 miles of habitat. The completion of this project would help secure Rio Grande cutthroat trout into the future.

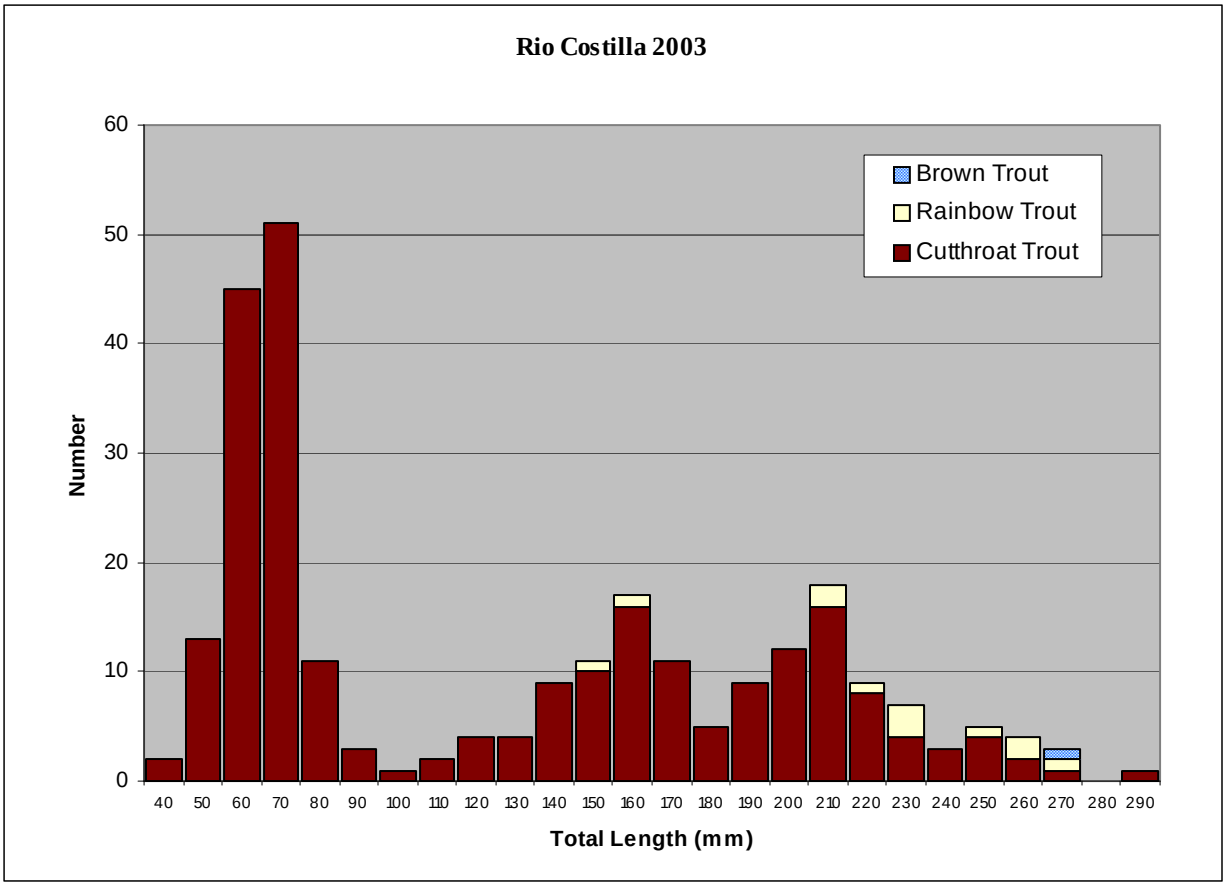


Figure 1-1. Size-structure of trout populations in Rio Costilla on the Valle Vidal, September 2003.

Comanche Creek

Comanche Creek and all of its tributaries are contained within the boundaries of the Valle Vidal. In total, the Comanche Creek drainage contains nearly 60 miles of stream. The upper portions, including Vidal Creek, contain pure Rio Grande cutthroat trout. White sucker and longnose dace are also found in the Comanche Creek drainage.

Since 1998, groups such as New Mexico Trout, Trout Unlimited, and the Quivira Coalition have been

working with Carson National Forest (and their permittees), New Mexico Department of Game and Fish, and the New Mexico Environment Department to improve fish habitats and water quality in Comanche Creek. Volunteer groups have assisted in the construction of several grazing exclosures and plantings to help establish woody vegetation along the creek. Additionally with help from an an EPA 303d grant and a Watershed Implementation Plan, other projects have been completed to help decrease sedimentation from roads and headcuts in the drainage.

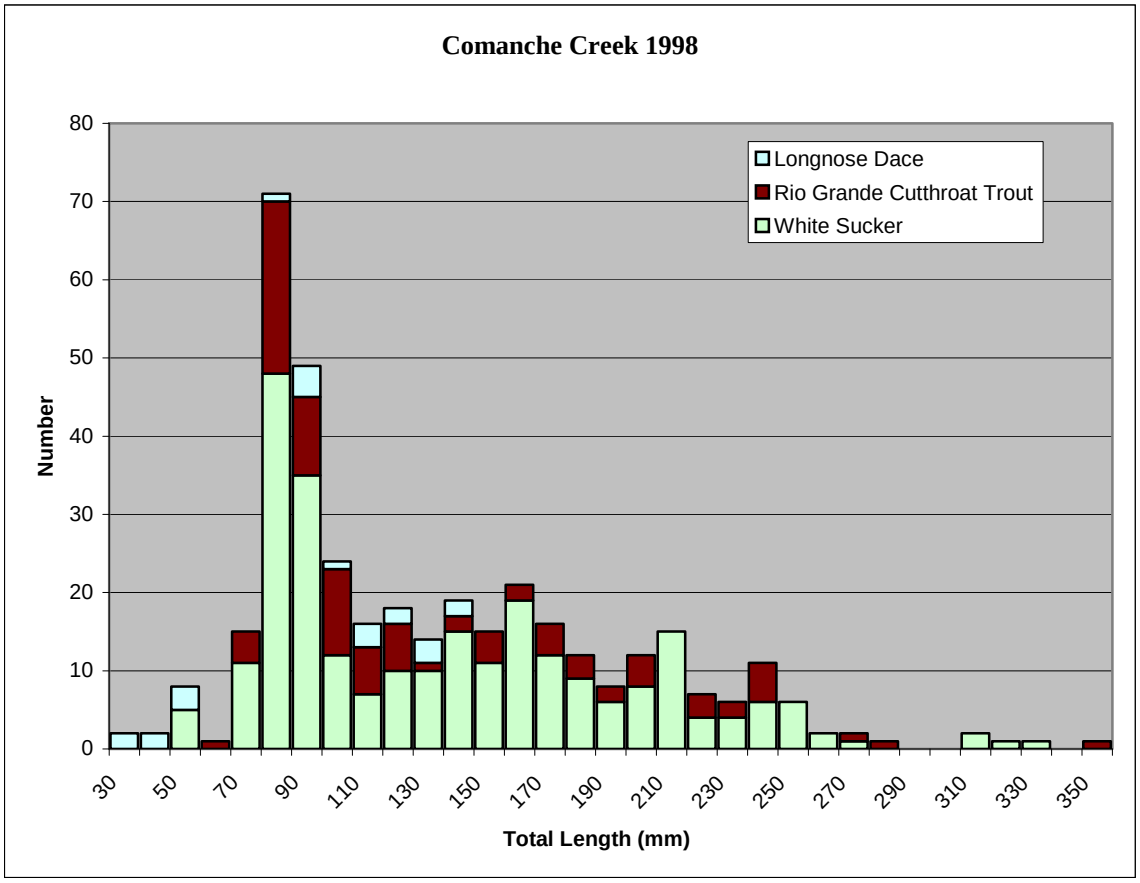


Figure 1-2. Size-structure of fish populations in Comanche Creek, summer 1998.

Powderhouse Creek

Powderhouse Creek is a small tributary to the Rio Costilla that flows in just below Costilla reservoir. Renovation of Powderhouse Creek for Rio Grande cutthroat trout was completed in 1997. Fintrol® (antimycin-A) was applied to the stream above a waterfall barrier to remove nonnative brook trout that were displacing pure native Rio Grande cutthroat. Following treatment, Rio Grande cutthroat trout were returned to the stream. The stream now supports about 2000 Rio Grande cutthroat trout per surface hectare. Angler use on this stream is about 100-angler days/year. Below the barrier brook trout as well as Rio Grande cutthroat trout are available to the angler. In total, Powderhouse creek has four miles of fish habitat, 3 of which are above the fish barrier.

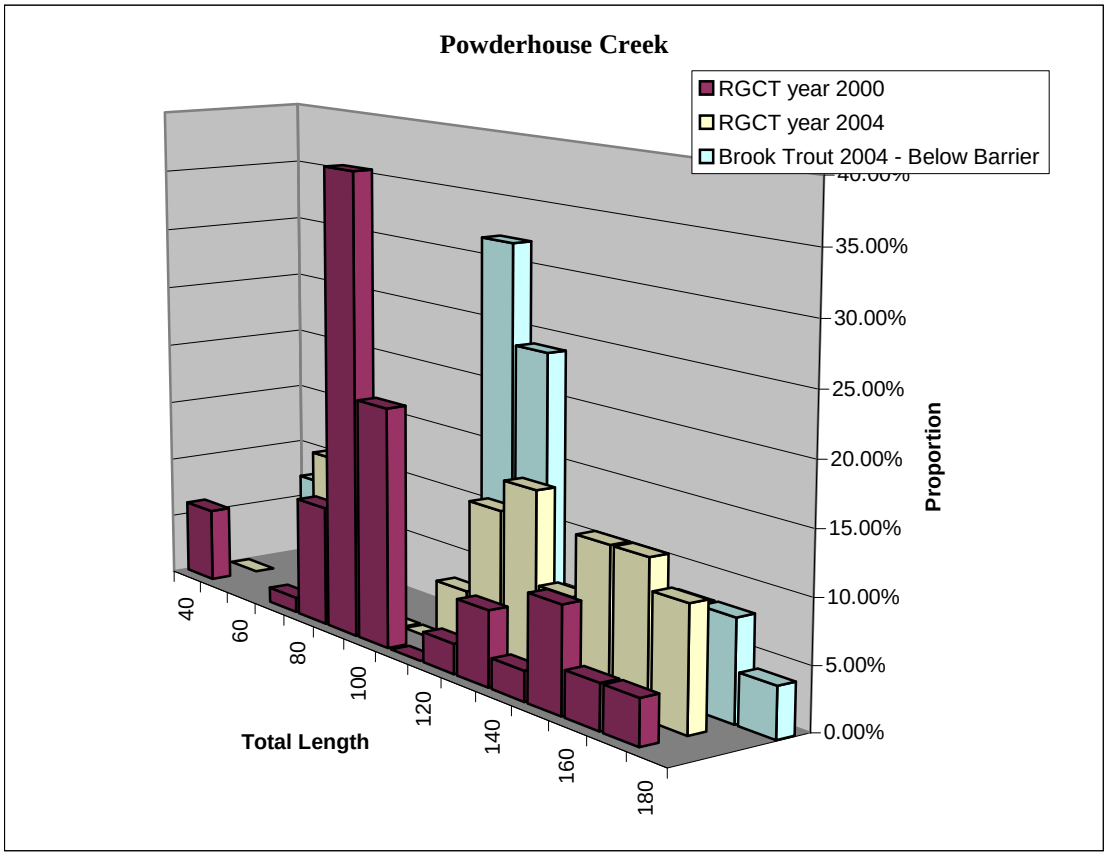


Figure 1-3. Size-structure of trout populations in captured in Powderhouse Creek, 2000 and 2004.

La Cueva Creek

La Cueva Creek is also a small tributary of the Rio Costilla, joining it about one mile upstream of the Comanche Creek confluence. This system also has Rio Grande cutthroat trout. La Cueva Creek has a very small width to depth ratio, with deep pools, which provide habitat for Rio Grande cutthroat trout. Few anglers venture up into this small canyon stream. On average 200 angler days are reported for La Cueva creek each year.

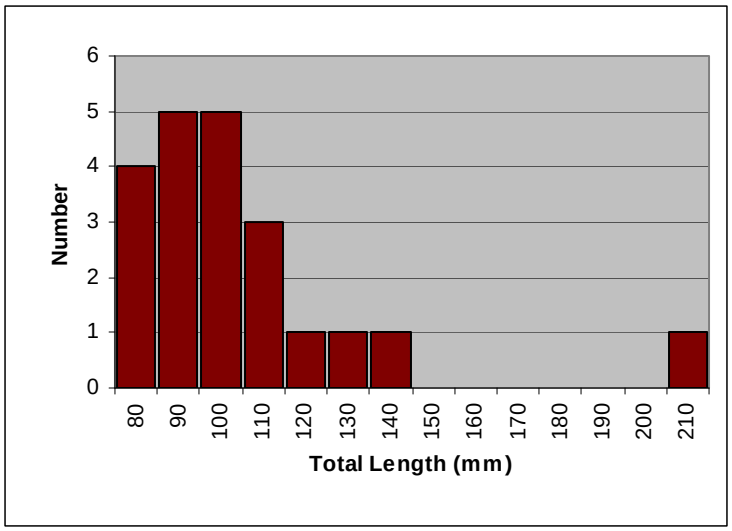


Figure 1-4. Size-structure of Rio Grande cutthroat trout population in La Cueva creek, July 2004.

North Ponil Drainage

The main headwater of North Ponil Creek is McCrystal Creek, which flows off Vermejo Park Ranch onto the Valle Vidal. The upper portions of McCrystal Creek contain a population of Rio Grande cutthroat trout. A popular campground near the creek provides access for hikers and anglers. On average, 150 angler days are spent fishing for the cutthroat trout in McCrystal Creek.

Lower in the drainage, North Ponil Creek contains populations of creek chub, longnose dace, and nonnative white sucker. Seally Canyon also contains creek chub. There are several ephemeral lakes associated with the North Ponil drainages. Packard's fairy shrimp, a rare species in New Mexico, occupy these lakes.

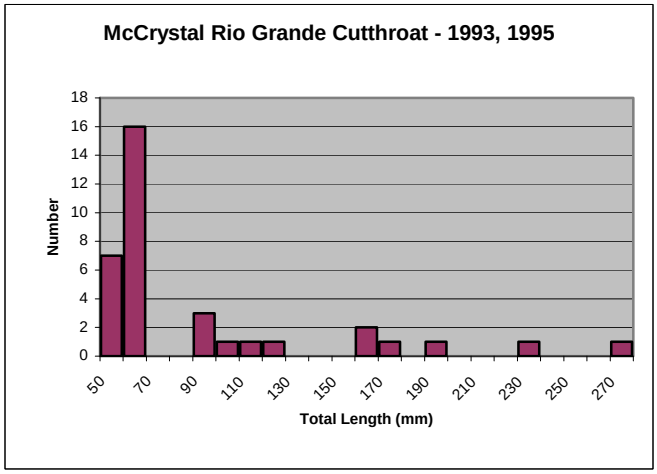


Figure1-5. Size-structure of Rio Grande cutthroat trout population in McCrystal Creek , 1993 and 1995.

Middle Ponil Drainage

Upper portions of Middle Ponil Creek, above Shuree Lakes, flow though a meadow off the east slope of Little Costilla Peak. This area contains a population of cutthroat x rainbow trout hybrids. Approximately 300 angler days are reported for this area.

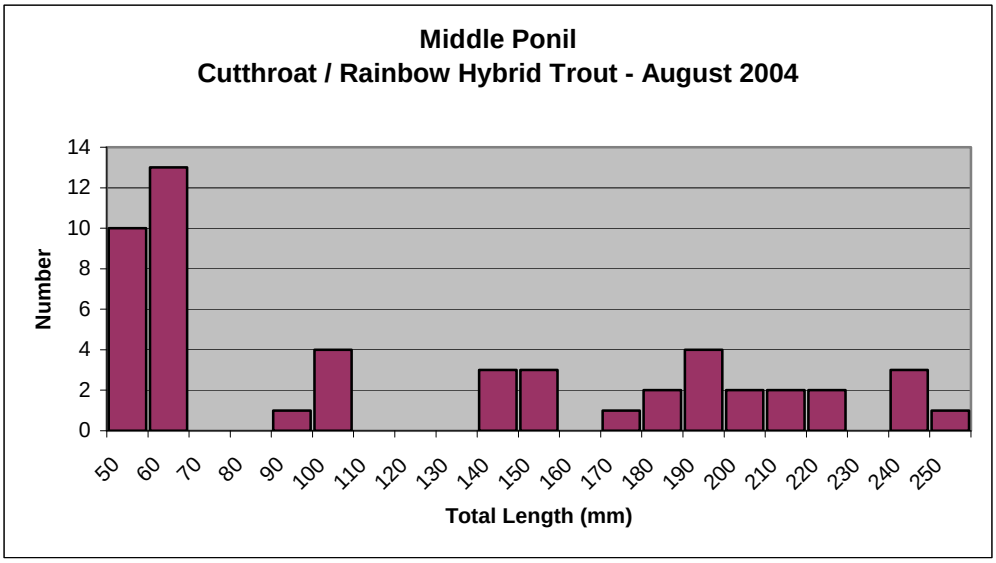


Figure 1-6.Size-structure of cutthroat x rainbow trout population in Middle Ponil Creek, August 2004.

Shuree Lakes are the second-most visited location for angling on the Valle Vidal. On average, 4,500 angler days are reported each year for those looking to catch stocked rainbow trout. This is the only water on the Valle Vidal where fish can be kept, the bag limit is two trout over 15". Shuree Lakes include three ponds ranging in size from 1 to 7 acres. All three ponds are stocked annually with trophy sized trout. One of the ponds is designated as a "kids pond" for anglers under 12 years of age.

Below Shuree Lakes, mainly cutthroat x rainbow trout are found. In the summer of 2002, the nearly 100,000 acre Ponil Complex Fire burned through the area. It is believed that all the fish below Greenwood canyon were killed by ash flows (J. Martinez, Carson N.F. pers. Com.).

Below the Valle Vidal boundary, Middle Ponil Creek flows onto Elliott Barker State Wildlife Area and Philmont Scout Ranch.

Other Waters

There are several waters on the Valle Vidal, including Bonita, Abreu, and Lookout canyons that have not been recently surveyed for fish. It is likely these waters are ephemeral and contain no fish; however, they may contain important habitat for aquatic invertebrates.

Leandro Creek

Valle Vidal contains the headwaters of Leandro Creek. Approximately three miles of stream are within Valle Vidal. After leaving Valle Vidal, the stream flows through Vermejo Park Ranch to its confluence with Vermejo River. In 1998, the portions of Leandro Creek on the Valle Vidal were renovated for Rio Grande cutthroat trout. Brook trout were removed using Fintrol® (antimycin-A) and Rio Grande cutthroat trout from Ricardo Creek (a nearby tributary to the Vermejo River) were released into the renovated stream. A constructed waterfall barrier, just upstream of Vermejo Park Ranch, prevents movement of nonnative brook trout back into Rio Grande cutthroat trout habitat.

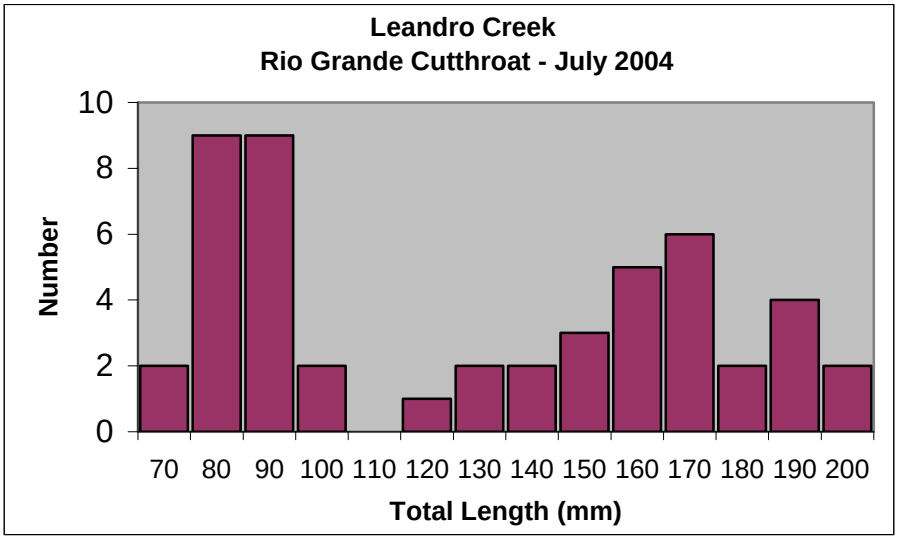


Figure 1-7. Size-structure of Rio Grande cutthroat trout population in Leandro Creek, July 2004.

Appendix 2. Lists of Wildlife Species.

Table 2-1. List of native vertebrate wildlife species found on the Valle Vidal.
** Species likely to be impacted by reduction in water quality/quantity, and associated impacts on mesic and riparian habitats.
*Species that could potentially be impacted by reduction in water quality/quantity, and associated impacts on mesic and riparian habitats.

Common Name	Species	Status
Fish		
**Rio Grande cutthroat trout	*Oncorhynchus clarki virginalis*	Sensitive/Species of Concern
**Creek chub	*Semotilus atromaculatus*	
**Longnose dace	*Rhinichthys cataractae*	
Amphibians		
**Tiger salamander	*Ambystoma tigrinum*	
**Chorus frog	*Pseudacris triseriata*	
**Northern leopard frog	*Rana pipiens*	Sensitive
Reptiles		
Mountain short-horned lizard	*Phrynosoma hernandesi*	
Fence lizard	*Sceloporus undulatus*	
Plateau striped whiptail	*Cnemidophorus velox*	
Many-lined skink	*Eumeces multivirgatus*	
Racer	*Coluber constrictor*	
Ringneck snake	*Diadophis punctatus*	
Hognose snake	*Heterodon nasicus*	
Smooth green snake	*Liochlorophis vernalis*	
Bullsnake	*Pituophis catenifer*	
**Blackneck garter snake	*Thamnophis cyrtopsis*	
**Wandering garter snake	*Thamnophis elegans*	
**Plains garter snake	*Thamnophis radix*	
Prairie rattlesnake	*Crotalus viridis*	
Birds		
**Bald Eagle	*Haliaeetus leucocephalus*	Federally Threatened
*Peregrine Falcon	*Falco peregrinus anatum*	State Threatened
Boreal Owl	*Aegolius funereus*	State Threatened
*Northern Goshawk	*Accipiter gentilis*	Sensitive/Species of Concern
Mexican Spotted Owl	*Strix occidentalis lucida*	Federally Threatened
Mammals		
*Masked Shrew	*Sorex cinereus*	
*Montane Shrew	*Sorex monticolus*	
Merriam's Shrew	*Sorex merriami*	
**Water Shrew	*Sorex palustris*	
*Little Brown Myotis Bat	*Myotis lucifugus*	Sensitive
*Long-eared Myotis	*Myotis evotis*	Sensitive
*Fringed Myotis	*Myotis thysanodes*	Sensitive
*Long-legged Myotis	*Myotis volans*	Sensitive
*Western Small-footed Myotis	*Myotis ciliolabrum*	Sensitive
*Silver-haired Bat	*Lasionycteris noctivagans*	

Table 2-1. Continued – list of native vertebrate wildlife species of the Valle Vidal.

Common Name	Species	Status
*Big Brown Bat	*Eptesicus fuscus*	
*Hoary Bat	*Lasiurus cinereus*	
*Townsend's Big-eared Bat	*Corynorhinus townsendi*	
Pika	*Ochotona princeps*	
Mountain Cottontail	*Sylvilagus nuttalli*	
Snowshoe Hare	*Lepus americana*	
Least Chipmunk	*Neotamias minimus*	
Colorado Chipmunk	*Neotamias quadrivittatus*	
Yellow-bellied Marmot	*Marmota flaviventris*	Sensitive
Thirteen-lined Ground Squirrel	*Spermophilus tridecemlineatus*	
Spotted Ground Squirrel	*Spermophilus spilosoma*	
Rock Squirrel	*Spermophilus variegatus*	
Golden-mantled Ground Squirrel	*Spermophilus lateralis*	
Gunnison's Prairie Dog	*Cynomys gunnisoni*	Sensitive
Abert's Squirrel	*Sciurus aberti*	
Red Squirrel	*Tamiasciurus hudsonicus*	
Botta's Pocket Gopher	*Thomomys bottae*	
Northern Pocket Gopher	*Thomomys talpoides*	Sensitive
**Beaver	*Castor canadensis*	
Deer Mouse	*Peromyscus maniculatus*	
Brush Mouse	*Peromyscus boylii*	
Rock Mouse	*Peromyscus difficilis*	
Mexican Woodrat	*Neotoma mexicana*	
Bushy-tailed Woodrat	*Neotoma cinerea*	
*Gapper's Red-backed Vole	*Clethrionomys gapperi*	
*Heather Vole	*Phenacomys intermedius*	Sensitive
*Meadow Vole	*Microtus pennsylvanicus*	
*Long-tailed Vole	*Microtus longicaudus*	
**Muskrat	*Ondatra zibethicus*	
**Western Jumping Mouse	*Zapus princeps*	
Porcupine	*Erethizon dorsatum*	
Coyote	*Canis latrans*	
Gray Fox	*Urocyon cinereoargenteus*	
Black Bear	*Ursus americanus*	
*Raccoon	*Procyon lotor*	
American Marten	*Martes americana*	State Threatened
Ermine	*Mustela erminea*	
Long-tailed Weasel	*Mustela frenata*	
**Mink	*Mustela vison*	
Badger	*Taxidea taxus*	
Striped Skunk	*Mephitis mephitis*	
Mountain Lion	*Felis concolor*	
Bobcat	*Felis rufus*	
*Elk	*Cervus elaphus*	
*Mule Deer	*Odocoileus hemionus*	

Table 2-2. Aquatic invertebrates known to exist in the waters of the Valle Vidal.

Order	Family	Taxa	Costilla	Middle Ponil	North Ponil
AMPHIPODA	Hyalellidae	*Hyalella azteca*	x		
AMPHIPODA	Hyalellidae			x	
ANNELIDA		*Lumbricus aquaticus*	x		
ANNELIDA	Hirudinea		x		
ANNELIDA	Nematoda		x		
ANNELIDA	Oligocheaeta		x		
ANNELIDA	Tubificidae		x		x
ARACHNIDA	Trombidiformes		x		
BASOMMATOPHORA	Planorbidae	*Gyraulus sp.*		x	
BASOMMATOPHORA	Lymnaeidae	*Lymnaea* sp.	x		
BASOMMATOPHORA	Physidae	*Physella*		x	
BASOMMATOPHORA	Lymnaeidae			x	
BRACHIOPODA		*Branchinecta packardi*		x	x
BRACHIOPODA		*Eubranchipus bundyi*	x		
COLEOPTERA	Dytiscidae	*Agabus sp.*	x		
COLEOPTERA	Elmidae	*Cleptelmis sp.*	x		
COLEOPTERA	Haliplidae	*Haliplus sp.*		x	
COLEOPTERA	Dryopidae	*Helichus sp.*	x		x
COLEOPTERA	Elmidae	*Heterlimnius sp.*	x	x	
COLEOPTERA	Hydraenidae	*Hydraena sp.*	x		
COLEOPTERA	Elmidae	*Narpus sp.*	x		
COLEOPTERA	Elmidae	*Optioservus sp.*	x	x	x
COLEOPTERA	Elmidae	*Zaitzevia parvula*	x		
COLEOPTERA	Elmidae	*Zaitzevia sp.*		x	
COLEOPTERA	Curculionidae		x		
COLEOPTERA	Dryopidae			x	
COLEOPTERA	Elmidae			x	
COLEOPTERA	Hydrophilidae		x		
COLEOPTERA				x	
COLLEMBOLA			x		
DIPTERA	Ceratopogonidae	*Probezzia sp*		x	
DIPTERA	Bephariceridae	*Agathon sp.*	x		
DIPTERA	Tipulidae	*Antocha*		x	
DIPTERA	Tipulidae	*Antocha monticola*	x		
DIPTERA	Athericidae	*Atherix sp.*	x		
DIPTERA	Ceratopogonidae	*Atrichopogon sp.*	x		
DIPTERA	Ceratopogonidae	*Bezzia sp.*	x	x	x
DIPTERA	Empididae	*Chelifera*		x	
DIPTERA	Empididae	*Chelifera sp.*	x		

Table 2-2 cont. Aquatic invertebrates known to exist in the waters of the Valle Vidal.

Order	Family	Taxa	Costilla	Middle Ponil	North Ponil
DIPTERA	Chironomidae	*Chironominae sp.*	x	x	
DIPTERA	Tabanidae	*Chrysops*		x	
DIPTERA		*Culicoides sp.*	x		
DIPTERA		*Dicanota sp.*	x		x
DIPTERA	Tipulidae	*Dicranota sp.*	x	x	
DIPTERA		*Eukiefferiella sp.*			x
DIPTERA	Tipulidae	*Hexatoma sp.*	x	x	
DIPTERA	Tipulidae	*Holorusia grandis*	x		
DIPTERA	Muscidae	*Limnophora sp.*	x		
DIPTERA	Tipulidae	*Limonia sp.*		x	
DIPTERA	Empididae	*Oreogeton sp.*	x		
DIPTERA	Tipulidae	*Ormosia*		x	
DIPTERA	Chironomidae	*Orthocladius sp.*	x	x	x
DIPTERA	Psychodidae	*Pericoma sp.*	x	x	
DIPTERA	Ceratopogonidae	*Probezzia sp.*	x		
DIPTERA	Simuliidae	*Prosimulinum sp.*	x		
DIPTERA	Simuliidae	*Simuliidae sp.*	x		
DIPTERA	Simuliidae	*Simulinum sp.*	x	x	
DIPTERA	Simuliidae	*Simulium vittatum*	x		
DIPTERA	Tabanidae	*Tabanus sp.*		x	
DIPTERA	Chironomidae	*Tanypodinae sp.*	x	x	
DIPTERA	Tipulidae	*Tipula sp.*	x		
DIPTERA	Empididae	*Trichoclinocera sp.*	x		
DIPTERA		*Tvetenia sp.*			x
DIPTERA	Chironomidae			x	
DIPTERA	Dixidae		x		
DIPTERA	Simuliidae			x	
DIPTERA	Stratiomyidae		x		
EPHEMEROPTERA	Baetidae	*Acentrella insignificans*			x
EPHEMEROPTERA	Baetidae	*Acentrella sp.*	x		
EPHEMEROPTERA	Ameletidae	*Ameletus sp.*	x	x	
EPHEMEROPTERA	Ephemerellidae	*Attenella margarita*	x		
EPHEMEROPTERA	Baetidae	*Baetis sp.*	x	x	
EPHEMEROPTERA	Baetidae	*Baetis tricaudatus*			x
EPHEMEROPTERA	Heptageniidae	*Cinygmula sp.*	x	x	
EPHEMEROPTERA	Ephemerellidae	*Drunella coloradensis*	x		
EPHEMEROPTERA	Ephemerellidae	*Drunella doddsi*	x		
EPHEMEROPTERA	Ephemerellidae	*Drunella doddsi*		x	
EPHEMEROPTERA	Ephemerellidae	*Drunella grandis*	x		
EPHEMEROPTERA	Ephemerellidae	*Drunella sp.*		x	x

Table 2-2 cont. Aquatic invertebrates known to exist in the waters of the Valle Vidal.

Order	Family	Taxa	Costilla	Middle Ponil	North Ponil
EPHEMEROPTERA	Heptageniidae	*Epeorus sp.*	x		
EPHEMEROPTERA	Ephemerellidae	*Ephemerella inermis*	x		x
EPHEMEROPTERA	Ephemerellidae	*Ephemerella infrequens*	x		
EPHEMEROPTERA	Ephemerellidae	*Ephemerella sp.*		x	
EPHEMEROPTERA	Heptageniidae	*Leucrocuta sp.*	x		
EPHEMEROPTERA		*Nixe sp.*			x
EPHEMEROPTERA	Leptophlebiidae	*Paralptophlebia sp.*	x		
EPHEMEROPTERA	Heptageniidae	*Rhithrogena sp.*		x	
EPHEMEROPTERA	Heptageniidae	*Rithrogena hageni*	x		
EPHEMEROPTERA		*Ticorythodes sp.*			x
EPHEMEROPTERA	Ephemerellidae	*Timpanoga hecuba*	x		
EPHEMEROPTERA	Ephemerellidae			x	
EPHEMEROPTERA	Heptageniidae			x	
EPHEMEROPTERA	Leptophlebiidae		x		
HAPLOTAXIDA	Tubificidae			x	
HEMIPTERA	Gerridae		x		
HETEROPTERA	Corixidae			x	
LEPIDOPTERA			x		
LUMBRICULIDA	Lumbriculidae			x	
ODANATA	Gomphidae	*Ophiogomphus sp.*	x	x	x
PLECOPTERA	Perlodidae	*Alloperla severa*			x
PLECOPTERA	Nemouridae	*Amphinemura banksi*			x
PLECOPTERA	Nemouridae	*Amphinemura sp.*	x		
PLECOPTERA		*Classinia sabulosa*	x		
PLECOPTERA	Perlodidae	*Cultus sp.*	x		
PLECOPTERA	Perlidae	*Hesperoperla pacifica*	x	x	x
PLECOPTERA	Perlodidae	*Isoperla sp.*	x		x
PLECOPTERA	Nemouridae	*Malenka*		x	
PLECOPTERA	Perlodidae	*Megarcys signata*	x		
PLECOPTERA		*Paraleuctra sp.*	x		
PLECOPTERA	Pteronarcyidae	*Pteronarcella badia*	x		x
PLECOPTERA	Pteronarcyidae	*Pteronarcella sp.*		x	
PLECOPTERA	Pteronarcyidae	*Pteronarcys sp.*	x		
PLECOPTERA	Perlodidae	*Skwala paralella*	x		
PLECOPTERA	Chloroperlidae	*Suwallia*	x		
PLECOPTERA	Chloroperlidae	*Sweltsa* sp.	x	x	
PLECOPTERA	Chloroperlidae	*Triznaka sp.*	x		
PLECOPTERA	Nemouridae	*Zapada sp.*	x	x	
PLECOPTERA	Capniidae		x		

Table 2-2 cont. Aquatic invertebrates known to exist in the waters of the Valle Vidal.

Order	Family	Taxa	Costilla	Middle Ponil	North Ponil
PLECOPTERA	Capniidae			x	
PLECOPTERA	Nemouridae			x	
PLECOPTERA	Perlodidae			x	x
PODOCOPIDA			x	x	
TRICHOPTERA	Glossosomatidae	*Agapetus sp.*	x		
TRICHOPTERA	Glossosomatidae	*Anagapetus sp.*	x		
TRICHOPTERA	Hydropsychidae	*Arctopsyche sp.*	x	x	
TRICHOPTERA	Brachycentridae	*Brachycentrus sp.*	x	x	
TRICHOPTERA		*Ceraclea sp.*			x
TRICHOPTERA	Hydropsychidae	*Cheumatophyche sp.*	x		x
TRICHOPTERA	Limnephilidae	*Dicosmoecus sp.*	x	x	
TRICHOPTERA	Philopotamidae	*Dolophilodes sp.*	x		
TRICHOPTERA	Limnephilidae	*Ecclisomyia sp.*	x		
TRICHOPTERA	Glossosomatidae	*Glossosoma sp.*	x	x	
TRICHOPTERA	Hydropsychidae	*Helicopsyche borealis*	x		
TRICHOPTERA	Hydropsychidae	*Helicopsyche sp.*			x
TRICHOPTERA	Limnephilidae	*Hesperophylax sp.*	x	x	
TRICHOPTERA	Hydropsychidae	*Hydropsyche oslari*			x
TRICHOPTERA	Hydropsychidae	*Hydropsyche sp.*	x	x	
TRICHOPTERA	Hydroptilidae	*Hydroptila sp.*	x		
TRICHOPTERA	Lepidostomatidae	*Lepidostoma sp.*	x	x	
TRICHOPTERA	Limnephilidae	*Limnephilus sp.*	x		
TRICHOPTERA	Brachycentridae	*Micrasema* sp.	x	x	x
TRICHOPTERA	Uenoidae	*Neophylax sp.*	x		
TRICHOPTERA	Uenoidae	*Neothremma sp.*	x		
TRICHOPTERA	Hydroptilidae	*Ochrotrichia* sp.	x		x
TRICHOPTERA	Leptoceridae	*Oecetis sp.*	x		
TRICHOPTERA	Uenoidae	*Oligophlebodes* sp.	x	x	
TRICHOPTERA	Hydropsychidae	*Parapsyche sp.*	x		
TRICHOPTERA	Limnephilidae	*Psychoglypha sp.*	x		
TRICHOPTERA	Rhyacophilidae	*Rhyacophila brunea cpx.*	x		
TRICHOPTERA	Rhyacophilidae	*Rhyacophila hyalinata*	x		
TRICHOPTERA	Rhyacophilidae	*Rhyacophila sp.*		x	
TRICHOPTERA	Hydropsychidae			x	
TRICHOPTERA	Leptoceridae			x	
TRICHOPTERA	Limnephilidae			x	
TRICHOPTERA				x	
TROMBIDIFORMES			x		
TROMBIDIFORMES				x	
VENEROIDEA	Pisidiidae	*Pisidiums sp.*	x		
VENEROIDEA	Pisidiidae			x	

Appendix 3. Water Quality Data.

Table 3-1. Water quality monitoring sites in the Valle Vidal.

Station Name	Study Yr	Longitude	Latitude
Middle Ponil Creek @FR 1950	1989	-105.2136	36.7764
Middle Ponil Creek @FR 1950	1998		
North Ponil Creek @ FR 1950	1989	-105.0983	36.7756
North Ponil Creek @ FR 1950	1998		
Middle Ponil above South Ponil Creek	1989	-105.0381	36.6222
Middle Ponil above South Ponil Creek	1998		
North Ponil Creek above Ponil Creek	1989	-104.9656	36.5881
North Ponil Creek above Ponil Creek	1998		
Ponil Creek @ USGS gage	1989	-104.9464	36.5733
Ponil Creek @ USGS gage	1998		
Comanche Creek below Exposure*	2000	-105.2753	36.7792
Comanche Creek above Costilla Creek*	1989	-105.3186	36.8319
Comanche Creek above Costilla Creek	2000		
Costilla Creek above Comanche Creek*	1989	-105.3162	36.8326
Costilla Creek above Comanche Creek	2000		
Costilla Creek below Comanche Creek	1989	-105.3194	36.8319
Costilla Creek below Comanche Creek	2000		

*Temperature and Turbidity measurements taken 4 times/year 1990 to 1995

Table 3-2. Exceedence ratios (the number of exceedences of the water quality criteria divided by the total number of samples taken). Shaded cells indicate ratios >0.15.

	Study	Temp.	Turbidity	PH	Diss Al	TOC	TP	DO
Applicable standard		>23°C	25 NTU	>8.8or <6.6	hardness dependent		0.10mg/L	<6
Station Name								
Middle Ponil Creek @FR 1950	1989	0/5	0/5	0/5	NA	0/1	3/5	0/4
Middle Ponil Creek @FR 1950	1998	0/10	4/10	0/10	NA	0/6	0/6	0/10
North Ponil Creek @ FR 1950	1989	0/5	0/5	0/5	1/4	0/1	1/6	0/4
North Ponil Creek @ FR 1950	1998	0/10	7/10	0/10	NA	2/6	1/6	0/10
Middle Ponil above South Ponil Creek	1989	0/5	0/5	0/5	NA	0/1	0/5	0/4
Middle Ponil above South Ponil Creek	1998	0/10	6/10	0/10	NA	2/6	0/7	0/10
North Ponil Creek above Ponil Creek	1989	1/5	0/5	0/5	NA	0/1	0/5	0/4
North Ponil Creek above Ponil Creek	1998	0/10	6/10	0/10	NA	2/5	1/6	0/10
Ponil Creek @ USGS gage	1989	2/5	0/5	0/5	NA	0/1	0/5	0/4
Ponil Creek @ USGS gage	1998	0/10	6/10	0/10	6/8	1/6	0/7	0/10
Comanche Creek below Exposure	2000	0/8	0/8	0/8	0/8	0/7	0/8	0/8
Comanche Creek above Costilla Creek	1989	0/2	NA	1/2	NA	NA	0/2	NA
Comanche Creek above Costilla Creek	2000	0/8*	0/8	0/8	0/8	0/7	0/8	0/8
Costilla Creek above Comanche Creek	1989	0/3	0/1	0/3	NA	NA	0/4	0/1
Costilla Creek above Comanche Creek	2000	0/8*	0/8	0/8	1/8	0/7	0/8	0/8
Costilla Creek below Comanche Creek	1989	0/4	0/4	0/4	NA	NA	0/4	0/4
Costilla Creek below Comanche Creek	2000	0/8	0/8	0/8	1/8	0/7	0/8	0/8

* While grab samples did not show exceedences, thermographs deployed in 2002 and 2003 did.

Table 3-3. Summary of select water quality parameters from Costilla watershed. Shaded values exceed the applicable criteria.

Station Name	Date	Time	Temp. (°C)	D.O. (mg/L)	Total N (mg/L)	Total P (mg/L)	Turbidity (NTU)	Dissolved Aluminum (ug/L)
COMANCHE CREEK- above Costilla Creek	12-Sep-86	1645	17.5		0.14	0.02	2.50	
	14-Sep-86	1310	15.5		0.14	0.02	2.70	
	21-Aug-87	1135	17.0		0.18	0.02	2.70	
	11-Oct-87	1035	7.5		0.38	0.01	0.90	
	17-Jun-89	1315	18.0		0.17	0.06	3.00	
	29-Aug-89	1240	17.5		0.27	0.01	4.00	
	28-Mar-90	1050	3.0		0.83	0.12	8.70	
	31-May-90	1500	17.0		0.53	0.04	5.00	
	17-Jul-90	1250	18.0		0.26	0.01	3.20	50.00
	19-Sep-90	1350	17.0		0.17	0.01	4.00	300.00
	1-May-91	1235	8.0	9.60	0.31	0.08	6.50	400.00
	29-Jul-91	1245	13.9	7.50	0.50	0.02	4.00	100.00
	24-Oct-91	1240	8.5	8.80	0.36	0.03	2.70	100.00
	15-Apr-92	1140	4.1	12.10	1.20	0.09	29.00	1600.00
	29-Jul-92	1410	20.0	8.80	0.26	0.03	4.55	
	23-Oct-92	945	3.0	11.40	0.14	0.01	3.10	
	21-Sep-93	1800	15.0	7.10		0.09	2.40	0.10
	19-Oct-93	1500	9.0			0.09	3.29	
	28-Oct-93	1145	3.0			0.09	24.60	
	6-May-94	1200	9.0	8.10		0.09	22.20	1.00
	3-Jun-94	1045	12.0				7.80	
	18-Jun-94	1347	18.0				5.40	
	10-Nov-94	1325	1.0				5.80	
	12-Jun-95	1405	11.0				13.50	
	6-Jul-95	1745	19.5				8.27	
	28-Sep-95	1311	8.0				4.40	
COSTILLA CREEK - above Comanche Creek	12-Sep-86	1650	17.8		0.14	0.01	2.40	
	14-Sep-86	1315	15.8		0.25	0.01	2.70	
	31-Mar-87	1345	8.2	9.00	0.17	0.01		
	1-Apr-87	900			0.21	0.03		
	21-Aug-87	1145	17.8		0.51	0.06	7.90	
	11-Oct-87	1040	6.0		0.18	0.01	0.40	
	28-Mar-90	1050	6.0		0.55	0.04	5.30	
	31-May-90	1150	12.8		0.56	0.05	10.00	
	17-Jul-90	1210	18.0		0.42	0.63	3.70	60.00
	19-Sep-90	1245	15.0		0.24	0.05		300.00
	1-May-91	1125	5.0	10.10	0.33	0.09	11.50	600.00
	29-Jul-91	1155	16.0	7.00	0.23	0.05	4.80	200.00
	24-Oct-91	1145	6.7	8.70	0.35	0.03	2.10	100.00
	15-Apr-92	1110	6.0	12.50	0.52	0.10	11.00	900.00
	15-Apr-92	1111	6.0	12.50	0.58	0.07	11.00	900.00

Table 3-3 cont. Summary of select water quality parameters from Costilla watershed. Shaded values exceed the applicable criteria.

Station Name	Date	Time	Temp. (°C)	D.O. (mg/L)	Total N (mg/L)	Total P (mg/L)	Turbidity (NTU)	Dissolved Aluminum (ug/L)
COSTILLA CREEK - above Comanche Creek	29-Jul-92	1310	17.0	8.50	0.15	0.03	6.20	
	22-Oct-92	1345	8.0	9.10	0.14	0.01	0.90	
	22-Oct-92	1346	8.0	9.10	0.15	0.01	0.90	
	21-Sep-93	1645						0.10
	22-Sep-93	1300	17.0	7.20			0.68	
	4-Oct-93	1350				0.09		
	19-Oct-93	1430	10.0			0.09	0.63	
	6-May-94	1000						0.60
	6-May-94	1310	12.0	7.40		0.09	22.80	
	3-Jun-94	1450	13.0				10.10	
	10-Nov-94	1215	2.0				1.20	
	13-Jun-95	1120	12.0				7.90	
	7-Jul-95	1245	18.0				5.10	
	29-Sep-95	1030	11.0				8.20	
UPPER COMANCHE CRK	17-Jun-89	1245	19.0		0.25	0.09	6.00	
	29-Aug-89	1145	11.0		0.30	0.01	7.00	
	28-Mar-90	1005	2.0		0.97	0.13	9.00	
	31-May-90	1415	17.5		0.57	0.04	5.80	
	17-Jul-90	1345	19.0		0.46	0.07	6.80	60.00
	19-Sep-90	1435	18.8		0.34	0.09	7.00	30.00
	1-May-91	1325	10.2	8.10	0.33	0.14	7.10	400.00
	29-Jul-91	1350	13.0	6.90	0.53	0.05	15.00	100.00
	24-Oct-91	1315	8.5	8.80	0.27	0.06	5.40	100.00
	15-Apr-92	1240	5.9	11.60	0.85	0.15	28.00	800.00
	29-Jul-92	1500	20.0	8.20	0.60	0.05	13.50	
	23-Oct-92	1220	7.5	10.30	0.15	0.02	7.20	
	21-Sep-93	1600		7.90			16.00	0.10
	6-May-94	930	4.0	8.70		0.09	15.40	0.80
	3-Jun-94	940	11.0				6.10	
	18-Jun-94	1230	18.0				9.30	
	26-Aug-94	920					17.50	
	10-Nov-94	1610	0.9				8.30	
	12-Jun-95	1710	20.0				10.30	
	6-Jul-95	1820	20.0				8.00	
	28-Sep-95	1625	10.0				197.00	

Table 3-4. Summary of select water quality parameters Ponil watershed. Shaded cells indicate exceedence of the water quality criteria.

Station Name	Date	Time	Temp. (°C)	D.O. (mg/L)	Total N (mg/L)	Total P (mg/L)	Turbidity (NTU)	Diss. Al (UG/L)
PONIL CREEK AT NM 58	11-Sep-89	1410	14.00	8.50	0.30	0.14	28.00	
	12-Sep-89	925	11.90	8.60	0.27	0.21	44.00	
	12-Sep-89	1220	12.20	8.80	0.37	0.21	50.50	
	13-Sep-89	925	9.90	9.00	0.69	1.01	260.00	
	13-Sep-89	1245	12.40	8.80	0.63	0.90	272.00	
	11-May-98	1735	18.10	7.05			98.20	
	12-May-98	1440	15.60	7.60			112.00	
	13-May-98	1150	12.80	8.20			88.00	
	14-May-98	1410	15.90	7.80			104.00	
	28-Jul-98	1505	23.90	6.60	0.90	0.07	86.50	
	29-Jul-98	1350	26.80	8.30	0.62	0.05	48.80	
	6-Oct-98	1520	13.10	10.10	0.22	0.16	16.60	
	7-Oct-98	1540	16.90	8.90	0.45	0.05	17.80	10.00
PONIL CREEK AT USGS GAGE	5-Jun-89	1225	19.00	7.90	0.20	0.02	15.00	
	6-Jun-89	1905	20.90	6.80	0.14	0.01	4.40	
	7-Jun-89	1305	23.50	7.30	0.14	0.01	3.90	
	7-Jun-89	1510	23.10	6.90	0.14	0.02	3.80	
	8-Jun-89	1135	20.20		0.26	0.02	7.20	
	11-May-98	1640	15.70	7.80			43.40	160.00
	12-May-98	1150	9.60	9.25			46.00	700.00
	13-May-98	1525	15.70	7.60			41.10	200.00
	14-May-98	1130	11.40	8.60			52.10	40.00
	28-Jul-98	1415	20.50	7.00	1.20	0.09	99.40	110.00
	29-Jul-98	1250	21.50	7.60	0.30	0.05	56.90	90.00
	6-Oct-98	1415	12.20	8.20	0.25	0.05	5.86	10.00
	7-Oct-98	1400	13.20	8.50	0.37	0.05	4.60	10.00
	7-Oct-98	1500	14.70	9.40	0.29	0.05	9.03	
NORTH PONIL CREEK - ABOVE PONIL CREEK	5-Jun-89	1350	22.80	7.30	0.14	0.04	13.00	
	6-Jun-89	1850	19.90	6.70	0.14	0.01	4.60	
	7-Jun-89	1320	24.10	7.00	0.14	0.01	5.30	
	7-Jun-89	1450	23.00	6.80	0.14	0.01	5.70	
	11-May-98	1500	18.60	7.40			85.40	
	12-May-98	1220	13.10	8.15			148.00	
	13-May-98	1510	18.90	6.90			135.00	
	14-May-98	1210	14.60	7.90			219.00	
	28-Jul-98	1320	21.00	6.90	1.30	0.28	224.00	
	29-Jul-98	1230	21.90	7.60	0.60	0.09	117.00	
	6-Oct-98	1350	11.50	8.60	0.31	0.05	9.04	
	7-Oct-98	1330	12.40	8.70	0.36	0.05	13.60	

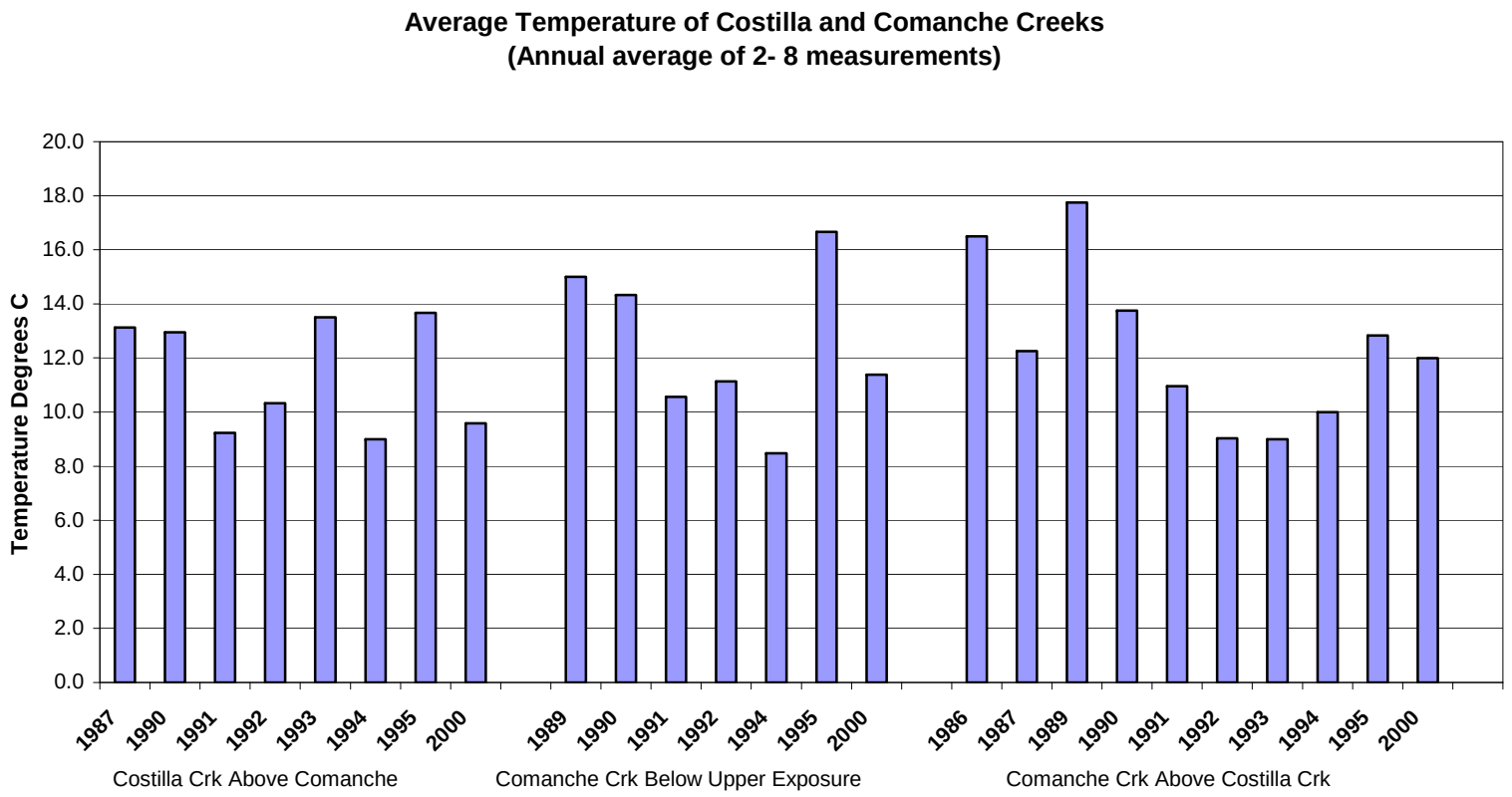


Figure 3-1. Average temperature collected in grab samples in Costilla and Comanche Creeks.

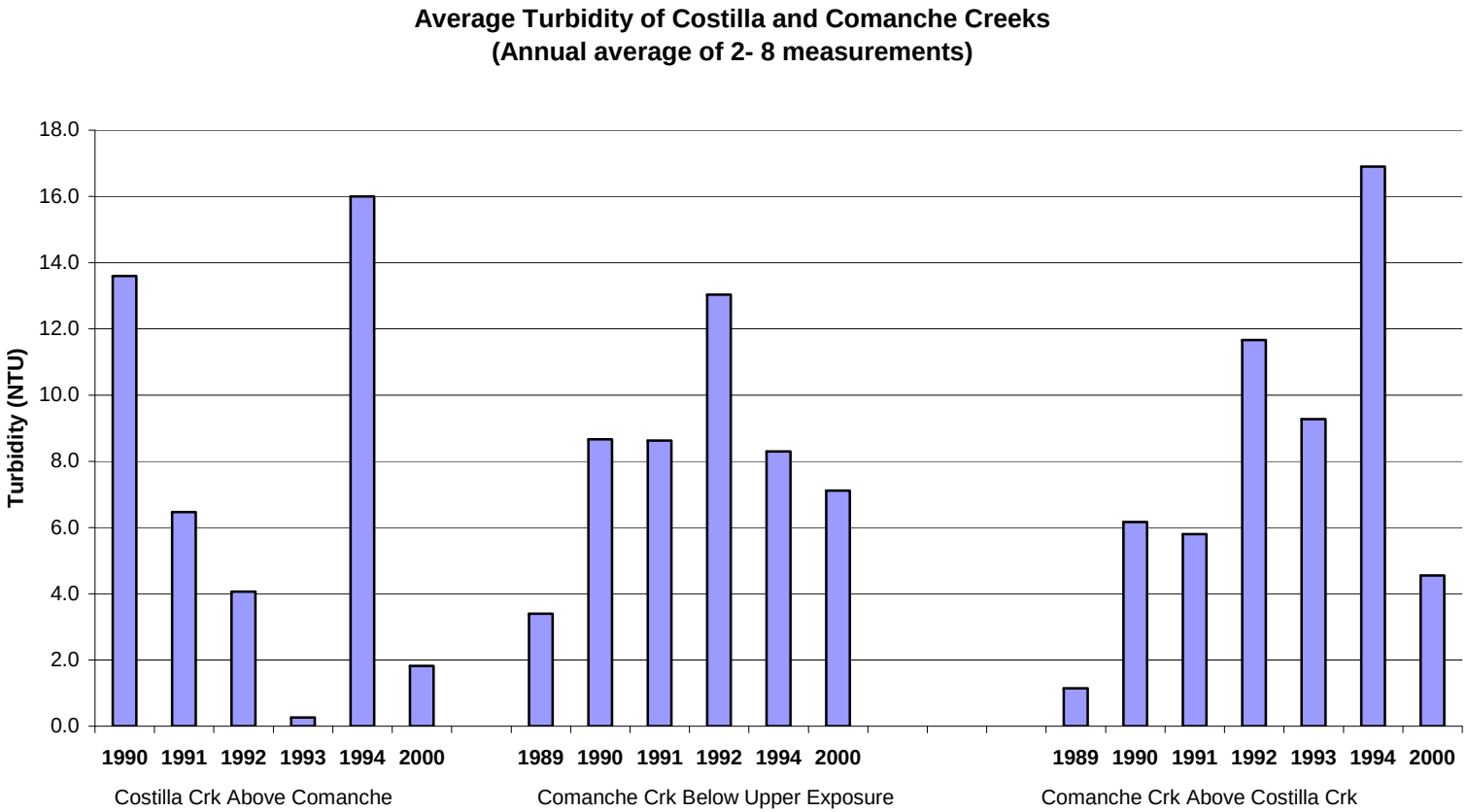


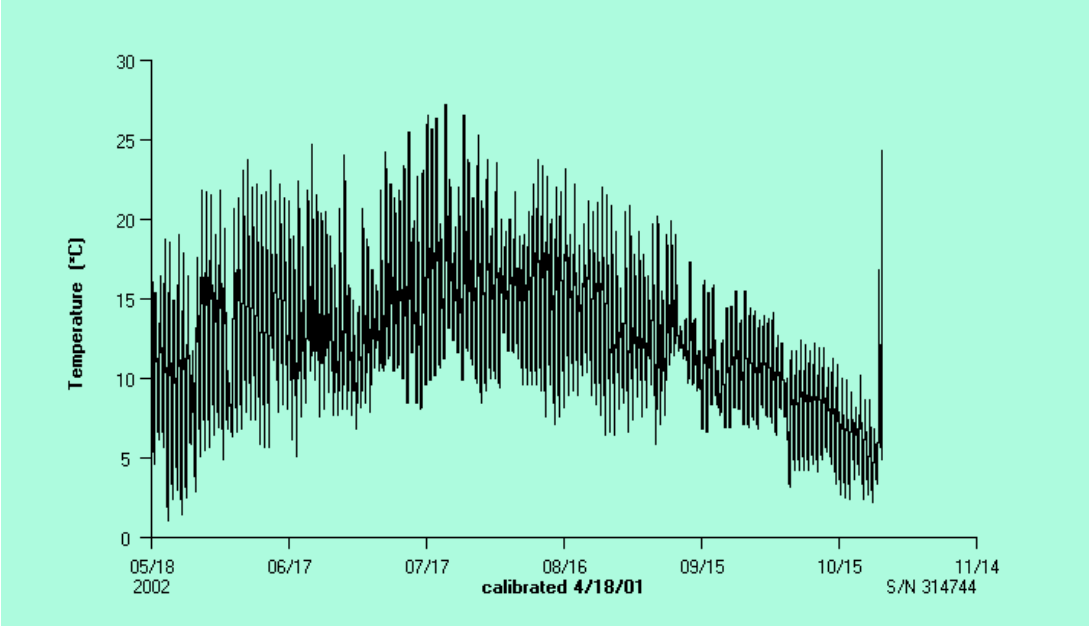
Figure 3-2. Average turbidity in grab samples collected in Costilla and Comanche Creeks.

Figure 3-3. Comanche Creek Thermograph Summary

Comanche Creek (below upper exclosure) - 4.0 miles upstream along Comanche Creek from intersection of Forest Roads 1900 and 1950.

Deployed - 18 May – 23 Oct 2002
Maximum temperature = 27.09 ^{0}C

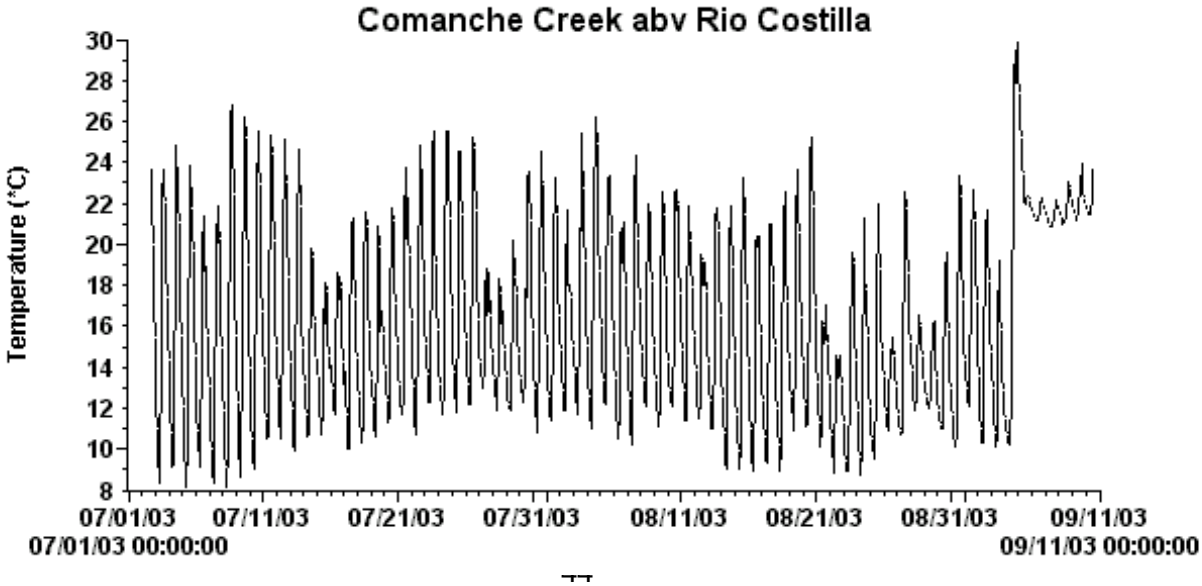
Data points >20 ^{0}C = 291
Data points >23 ^{0}C = 55



Comanche Creek (above confluence with Rio Costilla)
Immediately above the confluence of Comanche Creek and Rio Costilla.

Deployed - 2 Jul – 4 Sep 2003
Maximum Temperature = 26.89 ^{0}C

Data points >20 ^{0}C = 287
Data points >23 ^{0}C = 85



Appendix 4. Testimonials of the unique value of the Valle Vidal

1. Philmont Scout Ranch

February 24, 2005

Philmont Scout Ranch
17 Deer Run Road
Cimarron,NM 87714

505-376-2281

Mark Andersen, Director of Program

Philmont Scout Ranch operates as a 136,000 acre High Adventure Base for the Boy Scouts of America. Since the property was donated to the Boy Scouts of America in 1938 by Waite Phillips more than 800,000 people from throughout the United States have enjoyed backcountry wilderness adventures.

In 2004, 22,029 participants visited the Ranch during the summer. The majority of the participants enjoyed 12-day backpacking treks. Approximately 350 people arrive each day and after reaching our peak 12 days latter 350 people depart each day. These participants are supported by a summer seasonal staff of 1016 people. In addition to the backcountry program, Philmont operates the national training facility for the Boy Scouts of America and welcomed 5,324 participants in 2004 who took part in training and activities as families.

Crews arrive at the Ranch and follow one of 35 specified itineraries. During the trek they have an opportunity to camp at staff camps and trail camps. Each of the 34 staff camp conducts a program that hikers can participate in. Half of the staff camp conduct programs in outdoor skills like mountain hiking, rock climbing, challenge course, 12-gauge shotgun shooting, land navigation, archery and search and rescue. The other half offer historical programs where we depict various historical settings across the Ranch that occurred during the exploration of the west. These programs include mountain men, gold miners of the 1860, homesteaders and cowboys. We also have an archeology camp that studies the life of the Anasazi and one camp that celebrates the life of the Jicarilla Apache. In the North Ponil and Middle Ponil areas on Philmont we have identified around 1000 historical sites some dating to 400 AD, in addition to the only T-Rex footprint in the world.

In 1988 we began hiking participants in the Valle Vidal. During the first summer 200 Scouts experienced the beauty of the land, practicing Leave No Trace skills, and navigating through the road less areas of the Valle. In 1993 we entered into our first Special Use Permit with the United States Forest Service and have renewed the agreement again in 1998 and 2004. Our permit allows up to 3000 hikers each summer to backpack through the Valle. Since 1988, 23J86 participants have enjoyed a portion of their trek in the Valle.

Last summer we camped 700 participants. We expect 2000 to hike through the area this

summer. We have slowly returned to the area after the 2002 Ponil Fire Complex that burned 93,000 acres, 28,000 acres on Philmont and 23,900 acres on the Forest Service.

Our current use includes:

- Our participants enjoy hiking in an area with minimal roads and improvements.
- We practice Leave No Trace principals. Each crew receives special instruction before they begin their journey across the Valle Vidal.
- We ask each hiker to spend at least three hours working on specific conservation projects. Since 1988 we have contributed over 69,558 hours of service to the Forest Service. In 1995 we were selected as one of four groups to receive the Chiefs Volunteers Program National Award - "Caring for the Land and Serving People." Over the years our projects have included fire rehabilitation efforts, prescribed bum preparation, stream bed and water shed improvements, animal exclosure on McCrystal Creek, Seally Creek erosion barriers, and construction of Gabion Baskets.
- Three Staff Camps operate during the summer:
    - o Whiteman Vega - Mountain Biking, Tread Lightly, Conservation.
    - o Ring Place - Astronomy, historical presentation the Valle Vidal and the Ring Family and their unique cabin, environmental awareness, weather.

      Scouts often get the chance to enjoy wildlife watching in the Valle. The chance to observe the magnificent Elk herd is especially exciting.
    - o Seally Canyon - Search and Rescue and Conservation Awareness

Allowing young people to experience the history of the Great Southwest has been a significant part of a Philmont experience. Sharing the early life of the Ring Family and the inhabitants of Ponil Park and Seally are important parts of our program. One of our full time employees' grandfather is buried in the Pioneer Cemetery at Seally.

Another of our historical staff camps is the Rich Family homestead on the Middle Ponil bordering the Valle Vidal. We depict a living history program of Homesteading at the Rich Family Cabin. This past summer we hosted a family reunion of 33 decedents of the Rich Brothers. This was a first experience for most of them to enjoy the beauty of the area and appreciate the life of their early ancestors.

Trail camps include McCrystal Creek, Shuree Ponds, Middle Ponil/Greenwood Canyon, and Iris Park.

After the elk restrictions are lifted a few of our special treks make it to the top of Little Costilla to stand at 12,584 feet, "On Top of the World."

One of the highlights of our staff who spend their summer in the Valle Vidal is interacting with the public. We have an opportunity to share a great deal of history with those who camp at McCrystal Campground.
We also have been involved with numerous search and rescue activities for the

public (hikers, horse riders, and hunters) who find themselves in a difficult situation because of weather or inexperience.

We also provide the Forest Service with fire observers. This has been very important during the drought years. After the Ponil Fire we have been encouraged and supported by the Forest Service to develop a fire rehabilitation plan on the 28,000 acres which burned on Philmont. We have also been able to study and participate in the efforts that are taking place on the 23,900 acres of Forest lands that were impacted.

Our partnership for the past 16 years with the Forest Service has been a positive one. Our Scouts have been able to interact with Forest Service employees in many ways. It has allowed young people an opportunity to learn more about the management of the forest lands of America.

As you can tell, the Valle Vidal has become a very important part of the Philmont Scout Ranch backcountry operation. It provides Scouts from all fifty states and a number of foreign countries an opportunity to enjoy a wildland experience, one that can help to make a life changing experience. It has allowed us to serve up to an additional 3000 participants each year.

Recently, I received the following comments from a Scout from Elizabethtown, Pennsylvania. This Scout participated in one of our special treks through the Valle Vidal this past summer.

"For the first week we built trail at 10,000 feet near Baldy Mountain. The trail will connect Philmont Scout Ranch to the Valle Vidal. After completing a week of trail and friendship building, we were allowed to hike wherever we wanted as a reward for our service. We decide to leave the boundaries of Philmont and venture into the Valle. I was astonished. I love Philmont, I had been there once before in 2002, but I was awestruck by the beauty of the Valle."

"When I was at Philmont the first time, the Ponil Complex Fire was raging. This fire burned out much of the Valle region. It was amazing to venture, two years later, into the bumed area. The trees are still blackened with the soot from the fire. But even with the blackened trees, the scenery was breathtaking. One day of our trek we hiked to the top of Little Costilla. It is a 12,584 foot tall mountain in the Valle Region. Words don't exist that explain the beauty of the view. To the South is Philmont, to the North Colorado, to the West Wheeler Peak and to the East is the entire Valle."

"Hiking through the Valle had a huge impact on my life. Nowhere on earth have I felt closer to God and His creation. No words can express how beautiful this land is."

Petitioners' Exhibit 48

DIRECT TESTIMONY OF MARCY LEAVITT

My name is Marcy Leavitt and I am the Bureau Chief of the Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department (Department). The purpose of today's hearing is to propose amendments to Subsection D of 20.6.4.9 NMAC that would designate all of the surface waters of the United States Forest Service Valle Vidal Management Unit as Outstanding National Resource Waters. The nominated waters include:

(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal Special Management Unit;

(b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker Wildlife Management area;

(c) Shuree Lakes;

(d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal Special Management Unit; and

(e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal Special Management Unit.

Before we provide a detailed discussion of the evidence that supports the nomination, I would like to provide some background on the designation process. An Outstanding National Resource Water or 'ONRW', is a water that possesses

outstanding ecological, recreational, or natural resource values. The name, Outstanding National Resource Water, implies a pristine quality, and pristine waters certainly are candidates for the designation. However, other waters that have exceptional recreational or ecological significance are candidates as well. The US EPA describes ONRWs in the Section 4.7 of the *Water Quality Standards Handbook*[1] and an excerpt of the Handbook is attached as Exhibit 2. Section 4.7 states:

> *Outstanding National Resource Waters (ONRWs) are provided the highest level of protection under the antidegradation policy. The policy provides for the protection of water quality in high-quality waters that constitute an ONRW by prohibiting the lowering of water quality. ONRWs are often regarded as the highest quality waters of the United States: That is clearly the thrust of [40 CFR] 131.12(a)(3). However, ONRW designation also offers special protection for waters of "exceptional ecological significance." These are water bodies that are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional parameters such as dissolved oxygen or pH, may not be particularly high or whose characteristics cannot be adequately described by these parameters (such as wetlands).*

[1] Water Quality Standards Handbook: Second Edition. 1994. EPA-823-B-94-005. http://www.epa.gov/waterscience/standards/handbook/

In New Mexico for example, a lower mainstem wildlife refuge such as the Bitter Lake National Wildlife Refuge on the Pecos River near Roswell or the Bosque del Apache National Wildlife Refuge on the Rio Grande near Socorro might also be considered to be very important ecologically, but might not be considered "pristine water". In the Valle Vidal, we have waters that are generally of good quality and, more importantly, make a major contribution to the ecological and recreational significance of the area. All of these waters are ecologically and recreationally important and valuable as a natural resource, and ONRW designation would be beneficial to the state. And that's really the point: ONRW designation should be applied to waters needing special protection, regardless of having pristine water.

Designation as an ONRW ensures that water quality is maintained or improved in order to protect water for existing uses. ONRW designation does not limit ongoing, customary activities, as long as those uses do not degrade water quality from levels at the time of designation.

Protection of ONRWs is recognized under the New Mexico water quality standards' antidegradation policy which can be found in 20.6.4.8 NMAC. The policy states: "No degradation shall be allowed in high quality waters designated by the commission as outstanding national resource waters." Section 20.6.4.9 NMAC describes the procedures and criteria for ONRW designation. The procedural requirements in 20.6.4.9 NMAC were carefully reviewed and amended by the WQCC in the most recent triennial review of the water quality standards.

This nomination is being made pursuant to the petition requirements set forth in Subsection A of 20.6.4.9 NMAC. The Valle Vidal ONRW nomination petition has been jointly

submitted by the New Mexico Department of Game and Fish, the New Mexico Environment Department, and the Energy, Minerals and Natural Resources Department. As required by Paragraph A of 20.6.4.9 NMAC, the petition and our testimony today will present:

(1) A map showing the locations of the waters of the Valle Vidal. The Commission should refer to the map in Exhibit 3 for the purposes of this requirement;

(2) Evidence to support the criteria in Subsections B.1, B.2 or B.3 of Section 20.6.4.9. Please note that while the petitioners have included information supporting designation based on all criteria, but only one criteria must be met for ONRW designation.

(3) Available water quality data for waters of the Valle Vidal;

(4) A discussion of the activities that could contribute to a reduction in water quality;

(5) A discussion of the economic impacts and benefits of ONRW designation (note that as it states in the standards, this is a discussion, not an analysis); and

(6) An affidavit of publication, which is contained in Exhibit 4. This affidavit verifies that notice of the petition was published in the newspapers in the affected counties and in a newspaper of general statewide circulation. In addition, Exhibit 5 contains an affidavit of additional notice that was provided to the public regarding the petition.

A draft of the nomination was made available to the public and a public comment period was initiated on August 21, 2005. Additionally, a public meeting was held at the Philmont Scout Ranch in Cimarron on September 14, 2005 to provide an overview of the nomination and to answer questions from the public. The Department of Game and Fish received 78 comments on the draft petition. All of these comments supported the ONRW designation, except four.

Three entities that expressed concern in a form letter from the New Mexico Federal Lands Council, the New Mexico Cattle Growers' Association, and the New Mexico Wool Growers' Association. One additional entity, the New Mexico Farm and Livestock Bureau, also expressed concerns about the designation. Entities in favor of the designation include New Mexico Trout, Philmont Scout Ranch, Mesilla Valley Fly Fishers, San Luis Valley Ecosystem Council, Albuquerque Wildlife Federation, Taos Pueblo Environment Office, New Mexico Audubon Council, Oil & Gas Accountability Project, Amigos Bravos, Defenders of Wildlife, Coalition for the Valle Vidal, Southwest Environmental Center, Forest Guardians, New Mexico Wilderness Alliance, Four Corners Institute, Truchas Chapter of Trout Unlimited, Rio Grande Chapter of the Sierra Club, New Mexico Herpetological Society, New Mexico Council of Trout Unlimited, and numerous individuals. The comments have been provided as Exhibit 6.

During this hearing, representatives of the Department of Game and Fish, the Environment Department, and the Energy, Minerals and Natural Resources Department will provide testimony on the ONRW nomination and justification for the proposed changes to Subsection D of 20.6.4.9 NMAC. First, Dr. David Propst from the Department of Game and Fish will summarize information that was provided in the petition to address the requirements of Subsection A(5) of 20.6.4.9 NMAC, and the criteria within Subsections (B)(1) and (B)(2) of 20.6.4.9. NMAC. The next witness will be Lynette Guevara of NMED's Surface Water Quality Bureau. She will testify about water quality, activities that might contribute to a reduction in water quality, and additional evidence to substantiate designation as required by Subsections (A)(3), A(4) and A(5) of 20.6.4.9 NMAC. Ms. Guevara will also testify on the water quality criterion within Subsection (B)(3) of 20.6.4.9 NMAC. The last witness will be Mark Fesmire, Director of the Oil Conservation Division. Mr. Fesmire will testify regarding activities that

might degrade water quality in the Valle Vidal and will provide a discussion of economic impacts as required by Subsections (A)(4) and (A)(5) of 20.6.4.A.9 NMAC.

One last note -- during the hearing, witnesses may refer to the standards by the subsection letters alone. For example, a witness may say that a particular piece of evidence supports criteria (B)(3). When you hear this shorthand notation, please note that the witness is referring to a particular Subsection within Section 20.6.4.9 NMAC, the provisions regarding ONRWs.

That concludes my direct testimony.

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF
AMENDED PETITION TO NOMINATE SURFACE WATERS
IN FOREST SERVICE WILDERNESS AS
OUTSTANDING NATIONAL RESOURCE WATERS, WQCC 10-01 (R)

New Mexico Environment Department,
New Mexico Department of Game and Fish, and
New Mexico Energy, Minerals and Natural Resources Department,

Petitioners;

IN THE MATTER OF
PETITION TO AMEND ANTIDEGRATION
POLICY, 20.6.4.8.A(3) NMAC,

New Mexico Environment Department,

Petitioner;

IN THE MATTER OF
REQUEST TO AMEND ANTIDEGRADATION
POLICY IMPLEMENTATION PROCEDURES and
TO ISSUE GUIDANCE FOR NONPOINT SOURCE
DISCHARGES IN AREAS DESIGNATED AS ONRWS,

New Mexico Environment Department,

Petitioner.

DIRECT TESTIMONY OF MARCY LEAVITT

My name is Marcy Leavitt, and I am Acting Director of the Water and Waste Management Division of the New Mexico Environment Department ("NMED") and Chief of the NMED Surface Water Quality Bureau. I am presenting this testimony on behalf of Petitioners in the above captioned proceeding, nominating perennial surface waters within United States Forest Service ("Forest Service") Wilderness as Outstanding National Resource Waters ("ONRWs"). My direct testimony is Petitioners' Exhibit 38.

I. WORK EXPERIENCE AND EDUCATIONAL BACKGROUND

The Water and Waste Management Division includes the Surface Water Quality Bureau, Ground Water Quality Bureau, Hazardous Waste Bureau, and Department of Energy Oversight Bureau. I have worked for NMED for 21 years, all of which have been in the area of water quality protection. I was Chief of the Ground Water Quality Bureau from February 1993 to February 2003, and have been Chief of the Surface Water Quality Bureau from March 2003 to May 2008 and from January 2010 until the present. I was the Director of the Water and Waste Management Division from May 2008 until December 2009, and have retained those duties as Acting Director.

I have a Bachelor's Degree in Geology from the University of Cincinnati and a Master's Degree in Hydrology from New Mexico Institute of Mining and Technology. My resume is Petitioners' Exhibit 39.

II. INTRODUCTION AND SUMMARY OF TESTIMONY

On Earth Day 2008, Governor Bill Richardson announced the State of New Mexico's intention to seek ONRW designation for surface waters within Forest Service Wilderness and Inventoried Roadless Areas ("IRAs") in New Mexico. Governor Richardson assigned this project to NMED and requested NMDGF and EMNRD to assist in the project. Over the last two years NMED, NMDGF and EMNRD have met with interested stakeholders around the state, sought comments on the proposed ONRW designation, and made numerous revisions to the original proposal in direct response to the comments we received from stakeholders. The proposals that are the subject of this hearing are the result of two years' worth of efforts.

The principal purpose of the Amended Petition before the Water Quality Control Commission ("Commission") is to nominate all perennial surface waters of the state in

Wilderness areas within Forest Service lands as ONRWs. Petitioners, who are NMED, the New Mexico Department of Game and Fish ("NMDGF"), and the New Mexico Department of Energy and Minerals ("EMNRD") (collectively, "Agencies"), propose amendments to 20.6.4.9.D NMAC to accomplish this. *See* Pet. Ex. 1-Sub.[1] Designation of perennial waters within Wilderness areas will protect approximately 700 miles of 192 perennial rivers and streams, 29 lakes, and approximately 5,400 acres of wetlands.

NMED also proposes amendments to the Commission's Antidegradation Policy and Implementation Plan ("Antidegradation Policy") set forth in 20.6.4.8.A NMAC and Antidegradation Implementation Procedures ("Antidegradation Implementation Procedures"), and approval of a new Guidance for Nonpoint Source Discharges in Areas Designated as Outstanding National Resource Waters ("Nonpoint Source Guidance"). *See* Pet. Exs. 1-Sub, 2 and 3, respectively.

My testimony provides a summary of the process undertaken by the state Agencies to develop the proposal before the Commission today. I provide testimony discussing the benefit of the proposed designation to the state, that the nominated waters are a significant attribute of Wilderness, and the economic impacts of designation. My testimony also explains the basis for proposed amendments to the Antidegradation Policy, the Antidegradation Implementation Procedures and the newly proposed Nonpoint Source Guidance.

III. ONRW DESIGNATION

Protection of ONRWs is recognized under the New Mexico Water Quality Standards'

[1] Petitioners substitute Exhibit 1 from the Amended Petition with Exhibit 1 – Sub. Exhibit 1 from the Amended Petition mistakenly stated in proposed 20.6.4.9.D(3)(a) NMAC that, "The following waters and their *tributaries* are designated . . . ." Petitioners are not nominating tributaries in the Amended Petition and, therefore, the section should have stated that, "The following waters are designated . . . ."

("WQS) Antidegradation Policy, found in 20.6.4.8.A NMAC. Section 20.6.4.9 NMAC describes the procedures and criteria for ONRW designation. An Outstanding National Resource Water or "ONRW" is a water that possesses outstanding ecological, recreational, or natural resource values. While ONRWs include waters of pristine quality, other waters that have exceptional recreational or ecological significance are candidates as well. The United States Environmental Protection Agency ("EPA") discussed ONRWs in its *Water Quality Standards Handbook.*[2] Section 4.7, attached as Exhibit 40, states:

> Outstanding National Resource Waters (ONRWs) are provided the highest level of protection under the antidegradation policy. The policy provides for the protection of water quality in high-quality waters that constitute an ONRW by prohibiting the lowering of water quality. ONRWs are often regarded as the highest quality waters of the United States: That is clearly the thrust of [40 CFR §] 131.12(a)(3). However, ONRW designation also offers special protection for waters of "exceptional ecological significance." These are water bodies that are important, unique, or sensitive ecologically, but whose water quality, as measured by the traditional parameters such as dissolved oxygen or pH, may not be particularly high or whose characteristics cannot be adequately described by these parameters (such as wetlands).

Therefore, the Commission may designate waters that might not be considered pristine, but that are important to the state ecologically or for other reasons specified in Section 20.6.4.9 NMAC. The Commission, in fact, has already designated waters as ONRWs that are not "pristine": several of the designated waters with the Valle Vidal nomination have impaired water quality. Even though not all of the Valle Vidal waters are pristine, they make a major contribution to the ecological and recreational significance of the area. The same is true for nominated waters located within Forest Service Wilderness. While many of the waters have high water quality, some waters are impaired, and there are some waters for which NMED does not have water

[2] *Water Quality Standards Handbook,* EPA-823-B-94-005 (2d ed. 1994); http://www.epa.gov/waterscience/standards/handbook/.

quality data. Regardless, as explained in our Amended Petition and direct testimony, all waters nominated are deserving of ONRW status.

IV. PROPOSAL TO NOMINATE PERENNIAL WATERS IN FOREST SERVICE WILDERNESS

NMED, NMDF, and EMNRD nominate all perennial surface waters of the state in Wilderness areas within Forest Service lands as ONRWs. The waters nominated for ONRW designation lie within 12 Wilderness areas -- Aldo Leopold Wilderness, Apache Kid Wilderness, Blue Range Wilderness, Chama River Canyon Wilderness, Cruces Basin Wilderness, Dome Wilderness, Gila Wilderness, Latir Peak Wilderness, Pecos Wilderness, San Pedro Parks Wilderness, Wheeler Peak Wilderness, and White Mountain Wilderness – and lie within seven basins -- the Rio Grande (Upper, Middle and Lower), Pecos River, Gila River, Canadian River, San Francisco River, Mimbres Closed, and Tularosa Closed Basins. The waters nominated for ONRW status are:

1. The perennial surface waters, including rivers, streams and lakes, identified in the table in proposed Section 20.6.4.9.D(3)(a) NMAC in Petitioners' Exhibit 1-Sub. Only surfaces waters that are specifically identified in the table are nominated. These waters are also shown on 26 maps, Pet. Exs. 5-30.[3]

[3] These maps are:

Ex. 5 Map of Aldo Leopold Wilderness – North
Ex. 6 Map of Aldo Leopold Wilderness - Central
Ex. 7 Map of Aldo Leopold Wilderness – South
Ex. 8 Map of Gila Wilderness – Central
Ex. 9 Map of Gila Wilderness – East
Ex. 10 Map of Gila Wilderness – West
Ex. 11 Map of Apache Kid Wildernesses – North
Ex. 12 Map of Apache Kid Wildernesses – South
Ex. 13 Map of White Mountain Wilderness – North
Ex. 14 Map of White Mountain Wilderness – South
Ex. 15 Map of Chama River Canyon Wilderness – North
Ex. 16 Map of Chama River Canyon Wilderness – South

2. Wetlands within Wilderness areas that are identified in pink on the 26 maps, Pet. Exs. 4-30, and on Petitioners' Exhibit 102, which is a compact disc ("CD"), that has maps showing all nominated wetlands. Also, Petitioners' Exhibit 103 is a list of all individual wetlands nominated, which identifies each wetland by location, type and size. If wetlands are designated by the Commission as ONRWs, maps of such wetlands will be published in accordance with 1.24.10.22.B NMAC at the New Mexico State Library under the name "Maps of Wetlands Within United States Forest Service Wilderness Areas Designated as National Outstanding Resource Waters".

This proposal incorporates several significant changes to the original 2008 proposal that were made based on input from stakeholders. The Agencies have, in response to concerns about the breadth of the original proposal and its potential affect on stakeholders, scaled back the proposal to exclude waters within Inventoried Roadless Areas, non-perennial waters, and tributaries to nominated waters.

V. ONRW BACKGROUND

A. Antidegradation Policy

Federal regulations under the Clean Water Act ("CWA") require states to adopt a

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Ex. 17 Map of Cruces Basin Wilderness
Ex. 18 Map of Dome Wilderness
Ex. 19 Map of Latir Peak Wilderness
Ex. 0 Map of Pecos Wilderness - Northeast
Ex. 21 Map of Pecos Wilderness – Northwest
Ex. 22 Map of Pecos Wilderness – Pecos River 1
Ex. 23 Map of Pecos Wilderness – Pecos River 2
Ex. 24 Map of Pecos Wilderness – West Central
Ex. 25 Map of Pecos Wilderness – Southeast
Ex. 26 Map of Pecos Wilderness – Southwest
Ex. 27 Map of San Pedro Parks Wilderness – North
Ex. 28 Map of San Pedro Parks Wilderness – South
Ex. 29 Map of Wheeler Peak Wilderness
Ex. 30 Map of Blue Range Wilderness

"statewide antidegradation policy" and "methods for implementing such policy . . . ."[4] The requirement to develop an antidegradation policy and implementing methods or procedures is intended to help implement the overall objective of the CWA "to restore and maintain the physical, chemical and biological integrity of the nation's waters." 33 USC § 1251(a). States' antidegradation policy and implementation procedures are subject to EPA review and approval. 40 CFR § 131.6.

Federal regulations establish three levels of protection for surfaces waters, referred to by EPA as Tier 1, 2 and 3 waters. 40 CFR § 131.12(a)(1)-(3); Water Quality Standards Regulation, 48 Fed. Reg. 51400, 51403 (Nov. 8, 1983). Tier 1 maintains and protects existing uses and water quality conditions necessary to support such uses. Tier 1 requirements are applicable to all surface waters, including those that do not meet WQS. Tier 2 maintains and protects waters where existing conditions are better than necessary to support CWA § 101(a)(2) "fishable/swimmable" uses. Water quality can be lowered in Tier 2 waters when it is determined by the Commission to be necessary to accommodate important economic and social development in the area in which the water is located. In no case may water quality be lowered to a level which would interfere with existing or designated uses. ONRWs receive Tier 3 protection, the highest level of protection. Except for certain temporary changes, water quality cannot be lowered in ONRWs. The Commission has established New Mexico's Antidegradation Policy in Section 20.6.4.8 NMAC, and has approved Antidegradation Implementation Procedures as part of the Continuing Planning Process ("CPP").[5]

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[4] Federal regulations require states to include in their water quality standards an antidegradation policy consistent with 40 CFR § 131.12, and to include information regarding implementation of the policies. 40 CFR § 131.6(d), -(f)

[5] The CPP may be found in full at http://www.nmenv.state.nm.us/swqb/cpp/2004cpp.pdf.

B. Regulatory Criteria for ONRW Designation

The criteria for ONRW designation in New Mexico are set forth in Section 20.6.4.9.B NMAC, which provides that a surface water of the state, or a portion of a surface water of the state, may be designated as an ONRW where the Commission determines that the designation is beneficial to the State of New Mexico, and:

> (1) The water is a significant attribute of [special trout waters][6], national or state park, national or state monument, national or state wildlife refuge or designated wilderness area, or is part of a designated wild river under the federal Wild and Scenic Rivers Act; or
>
> (2) The water has exceptional recreational or ecological significance; or
>
> (3) The existing water quality is equal to or better than the numeric criteria for protection of aquatic life uses, recreational uses, and human health uses, and the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource.

The testimony presented by the Agencies demonstrates how these criteria have been met.

C. Prior ONRW Designations in New Mexico and ONRW Designation in Surrounding States

In 2005 and 2006, the Commission designated New Mexico's first ONRWs. To date, the Commission has designated two ONRWs:

- The Rio Santa Barbara (west, middle and east forks) within the Pecos Wilderness; and
- Surface waters within the Forest Service Valle Vidal Special Management Unit.

New Mexico, however, lags behind other western states in using ONRW protection to ensure the quality of its high elevation headwater streams, lakes and wetlands. In contrast:

[6] During the recent Triennial Review, the Commission amended Section 20.6.4.9.B(1) NMAC to include "special trout waters," which is a NMDGF designation under 19.31.4.11.A(4) NMAC, instead of "gold medal trout fishery," which is not a term used in New Mexico regulations. This amendment should be effective by the time that the Commission deliberates on this ONRW nomination.

- Wyoming has designated *all waters* within the boundaries of *Wilderness areas* and national parks, including *all wetlands* adjacent to those waters, and 15 other specific waters;
- Colorado's Water Quality Control Commission has approved 57segments of outstanding waters designations, including designations in 31 *Wilderness areas* and 2 national parks. These designations include *tributaries*, lakes, reservoirs, *and wetlands* in the Wilderness areas and national parks.
- Utah has designated *all waters within the state's national forests* and 55 other specific waters and their *tributaries*;
- Nevada has designated 95 waters, including 29 waters on *national forest* lands, from their headwaters to or near the national forest boundary; and
- Arizona has designated 22 specific waters.

See Wyoming Dept. of Environmental Quality, Water Quality Rules and Regulations, pp. 1-14 & A-1 to A-3; Colorado's Outstanding Waters (July 2010); Utah Administrative Code, Rule R317-2-12.1; Nevada Administrative Code, ch. 445A.124.4; Arizona Administrative Code, R18-11-112 Outstanding Arizona Waters (Pet. Ex. 41).

VI. PUBLIC PARTICIPATION PROCESS FOR NOMINATION

While the Agencies were not required to undertake any specific public participation process, the Agencies developed and undertook an extensive outreach campaign to reach as large number of potential stakeholders as possible to make sure that affected parties have a full opportunity to provide input on the proposed ONRW nomination. Announcements were provided using a variety of outreach tools including e-mail notices to trade and industry groups, newspaper ads, public service radio announcements, and flyers posted in public places. *See* Agencies' Outreach Efforts File (Pet. Ex. 42).

In September 2008, NMED released a public discussion draft of the ONRW proposal in order to begin a dialogue on potential ONRW designations. Agencies' ONRW Proposals (Sept. 1, 2008) (Pet. Ex. 43). The Agencies gave notice of the public discussion draft to a wide range of interested persons and stakeholders.[7] *See* Public Notice of ONRW Proposals, Public Meetings and Opportunity for Public Comment (Pet. Ex. 44). The release of the public discussion draft was followed by 11 public meetings in the fall of 2008 and early 2009. Meetings were held in areas that were most likely to be affected by the proposal. The first round of public meetings were held in Silver City, Socorro, Las Vegas, Pecos, Albuquerque, Ruidoso, Taos, El Rito, Abiquiu, Alcalde, and Cuba. *See* Sign Up Sheets for Public Meetings (Pet. Ex. 45). Public comments on the September 2008 public discussion draft were solicited and received, and include a science review by New Mexico State University's Range Improvement Task Force. *See* Public Comments on ONRW Proposals (Pet. Ex. 46). Participants from the first round of public meetings were included on mailing lists for notification of future public meetings and draft proposals.

Groups with whom the Agencies met include the Forest Service, Northern New Mexico Stockman's Association, New Mexico Mining Association, New Mexico Municipal League, the Middle Rio Grande Council of Governments, Trout Unlimited, New Mexico Trout, Southwest Consolidated Sportsmen, Wildlife Federation, WildEarth Guardians, New Mexico Association of Conservation Districts, New Mexico Range Improvement Task Force, and the multi-entity Forest and Watershed Health Coordinating Group. NMED made two presentations to the Intertribal

[7] Notice was give to the Surface Water Quality Bureau's general mailing list which includes the New Mexico Cattle Growers' Association, New Mexico Farm Bureau, and environmental advocacy groups, the New Mexico Association of Counties and New Mexico Municipal League, New Mexico State University and the Range Improvement Task Force, the New Mexico Acequia Association, tribal environmental coordinators, and the Forest Service.

Resource Advisory Council which includes environmental managers from tribes and Pueblos, and offered to meet with specific tribes and Pueblos as requested. The goal of the Agencies was to meet with any individual or group who wanted to meet to discuss the ONRW proposal. NMED also offered to meet with other key stakeholders such as the New Mexico Association of Counties and New Mexico Acequia Association.

NMED met with interim legislative committees prior to the 2009 legislative session, and presented testimony during the 2009 legislative session regarding House Joint Memorial 49 ("HJM 49"), which opposed the Governor's proposal to nominate waters within Wilderness areas and IRAs. HJM 49 was approved by the legislature. A concern expressed in HJM 49 was that the proposed designation would "cover more than five thousand three hundred miles of streams and rivers," representing a "much larger area than any former [ONRW] designation . . . ."

After passage of HJM 49 and as a direct result of the stakeholder input received, the Agencies scaled back the scope of the ONRW proposal to exclude waters in IRAs, and to include only surface waters in Wilderness areas.[8] One of the main concerns expressed during the public meetings and in public comment came from individuals holding grazing permits on Forest Service land. The grazing permittees were concerned that ONRW designation would affect their livelihood and their traditional way of life. The current Antidegradation Policy, as set forth in 20.6.4.8.A(3)(e) NMAC, expressly protects "preexisting land use activities allowed by federal or

[8] The original proposal including Wilderness areas and IRAs included over 5,000 stream miles; the proposal including only Wilderness areas included 1,450 stream miles..

state law," such as grazing in ONRW-designated areas.[9] However, to further confirm that existing activities, such as grazing, would be protected under the ONRW proposal, NMED amended its proposed Nonpoint Source Guidance to clarify that existing uses in Wilderness, such as grazing, are protected and would not negatively impacted by ONRW designation. The Agencies released the scaled-back proposal on June 18, 2009. *See* Agencies' ONRW Proposals (June 18, 2009) (Pet. Ex. 43).

The Agencies announced a second round of stakeholder meetings and solicited public comment on the revised proposal. Notice of the public meetings and request for public comment was sent to all stakeholders who had provided an address during the first round of stakeholder meetings, to every Wilderness grazing permittee identified by the Forest Service, and to affected counties. *See* Public Notice of ONRW Proposals, Public Meetings and Opportunity for Public Comment (Pet. Ex. 44). The New Mexico Cattle Growers Association was also enlisted to notify its members. Ten stakeholder meetings were held in summer and early fall of 2009 in Albuquerque, Pecos, Truth or Consequences, Silver City, Ruidoso, Abiquiu, Taos, Jemez Springs, Mora, and Reserve. *See* Sign Up Sheets for Public Meetings (Pet. Ex. 45). At the request of the Catron County Commission, NMED attended a second meeting in Reserve and a follow-up meeting in Socorro to discuss issues of importance to Catron County. NMED also met with the Executive Director of the New Mexico Association of Counties and attended several interim legislative committee hearings. Public comments on the June 2009 revised proposal were accepted through mid-October 2009. *See* Public Comments on ONRW Proposals (Pet. Ex. 46).

[9] "Preexisting land-use activities allowed by federal or state law prior to designation as an ONRW and controlled by [best management practices] shall be allowed to continue so long as there are no new or increased discharges resulting from the activity after designation of the ONRW." 20.6.4.8.A(3)(e) NMAC.

In response to the second round of public meetings and public comment, the Agencies issued a second revised proposal on November 20, 2009. The November 2009 proposed included revisions to address the substantial public input received on the June 2009 draft. *See* Agencies' ONRW Proposals (Nov. 20, 2009) (Pet. Ex. 43). Among the changes made in the November 2009 proposal were policy changes that would accompany and clarify implementation of the designation; revised language regarding pre-existing land use activities to address concerns about the impacts of the designation on Forest Service grazing permittees; a bifurcated process for point source and nonpoint source discharges to address concerns about potential citizen suits under the Clean Water Act; and new language to address EPA concerns regarding temporary and short-term degradation. NMED summarized the Agencies' responses to public comments in a document made available to stakeholders. *See* ONRW Response to Concerns (Pet. Ex. 47). The Agencies accepted comments on the November 2009 draft through January 2010. *See* Public Comments on ONRW Proposals (Pet. Ex. 46).During the course of drafting the various ONRW proposals, several rounds of comments were received from EPA and the Forest Service. *See* Forest Service Comments (Pet. Ex. 48); EPA Comments (Pet. Ex. 49). Letters of support for various ONRW proposals from various stakeholders are included in Petitioners' Exhibit 50.[10] Over time, letters of support have come from:

- Santa Fe Watershed Association
- Las Placitas Association
- New Mexico Conference of Churches
- Albuquerque/Bernalillo County Water Utility Authority
- City of Santa Fe
- City of Espanola
- 1000 Friends of New Mexico
- Sky Island Alliance

[10] Some letters of support were sent prior to Governor Richardson's initial announcement of the state's initiative on Earth Day 2008.

- Sierra Club, Rio Grande Chapter
- City of Las Cruces
- Avian Ambassadors
- Village of Los Lunas
- City of Rio Rancho
- The Honorable Martin Heinrich, United States House of Representatives (First Dist. NM)
- Gila Conservation Coalition
- Cuidad Soil and Water Conservation District
- New Mexico Council of Trout Unlimited
- League of Women Voters of New Mexico
- Regional Endocrinology Associates, PC
- Carson Forest Watch
- Village of Corrales

Additionally, NMED met a number of times with representatives from Catron County regarding the ONRW proposals. Catron County and NMED have already entered into a Memorandum of Understanding to provide a framework for their respective roles and responsibilities for ONRW designations and watershed protection and restoration projects. MOU Between Catron County and NMED (Pet. Ex. 71).

In accordance with 20.6.4.9.A(6) NMAC, the Agencies prepared a draft petition dated February 8, 2010 and provided public notice of the draft petition in newspapers in affected counties and a newspaper of general circulation statewide. Pet. Ex. 32. The draft petition was noticed through email to ONRW stakeholder list that NMED had developed, distributed to the Commission's mailing list, and posted on NMED's ONRW website - http://www.nmenv.state.nm.us/swqb/ONRW/. *See* Pet. Ex. 43. The draft petition addressed public comments received on the November 2009 draft and documented that the requirements of 20.6.4.9.A NMAC had been met. Changes made in the February 8, 2010 draft petition included establishing a six month limitation on temporary and short-term degradation in ONRWs in order to comply with EPA guidance; clarifying the meaning of the phrase "water quality shall be

maintained and protected"; clarifying and simplifying the Antidegradation Implementation Procedures; and replacing the requirement for "designated management agencies" to enter into agency -- specific memoranda of understanding with one process for all "oversight agencies" to ensure consistency in implementation. The Agencies filed their original Petition with the Commission on February 25, 2010.

The Commission scheduled the public hearing on the ONRW Petition to begin September 14, 2010. The public hearing on the ONRW Petition was noticed in accordance with NMSA 1978, § 74-6-6(C) and the Commission's Rulemaking Guidelines through publication in the New Mexico Register, newspapers in the area affected, and a newspaper of statewide circulation. *See* Notice of ONRW Public Hearing (Pet. Ex. 50). The public hearing was also noticed through distribution to the Commission's interested party list; posting on NMED's ONRW website; and email announcements to NMED's list of ONRW stakeholders. *See id.*

Finally, in response to continued concerns from the public regarding the breadth of the ONRW proposal, the Agencies made further amendments to the Petition in their May 17, 2010 Amended Petition. The Amended Petition further limited the scope of the nomination to exclude intermittent waters and tributaries to nominated waters. The Amended Petition nominates only specifically identified perennial waters, lakes, and wetlands within Wilderness areas. The Amended Petition is posted on NMED's ONRW website.

The public participation process undertaken by the Agencies for the ONRW initiative is the most extensive public participation process that NMED has undertaken for any water quality initiative of which I am aware.

VII. ONRW NOMINATION

A. Petition Requirements

Section 20.6.4.9.A NMAC sets forth certain documentation and evidence which must be included in any petition to nominate an ONRW. The Agencies' Amended Petition satisfies all requirements of 20.6.4.9.A NMAC. A petition must include maps of the surface waters nominated, including the location and proposed upstream and downstream boundaries. 20.6.4.9.A(1) NMAC. The Amended Petition includes 27 hard copy maps and a compact disc ("CD") of maps of the surface waters nominated. The hard copy maps consist of a Statewide Reference Map, which identifies each Forest Service Wilderness area and the major rivers (not identified by name) in each area, and 26 maps of the Forest Service Wilderness areas in New Mexico, which show the named nominated perennial streams, lakes and some wetlands. Pet. Exs. 5-30. The locations of the nominated wetlands are shown in pink on the hard copy maps in Exhibits 5-30, and are shown in more detail on maps on the CD of maps, Petitioners' Exhibit 102. Petitioners' Exhibit 103 is a chart of the polygon centroid coordinates (or the latitude and longitude coordinates) of all wetlands nominated. The 26 hard copy maps of the Wilderness areas identify the location and the upstream and downstream boundaries of the streams and lakes nominated. The CD and chart of polygon centroid coordinates identify the location and boundaries of all wetlands nominated.[11]

A petition must include a written statement and evidence based on scientific principles in support of the nomination, including specific reference to one or more of the applicable ONRW

[11] The Amended Petition also includes maps of the basins in which the Wilderness areas and nominated waters are located. These maps are:

Exhibit 31-A Map of the Northern Basins and Wilderness Areas
Exhibit 31-B Map of the Central Basins and Wilderness Areas
Exhibit 31-C Map of the Southwestern Basins and Wilderness Areas

criteria listed in Section 20.6.4.9.B NMAC. 20.6.4.9.A(2) NMAC. The Amended Petition includes sections explaining why the nominated waters (or some of the nominated waters) satisfy the regulatory criteria in 20.6.4.9.B NMAC as beneficial to the state and as a significant attribute of a designated wilderness area, a part of a wild river under the Wild and Scenic Rivers Act ("WSRA"), a significant attribute of a special trout water, water that has exceptional ecological significance, and water that has exceptional recreational significance. In addition to my testimony on the benefit to the state of designation and why the nominated waters are a significant attribute of Wilderness, testimony supporting these portions of the Amended Petition will be presented by Jill Wick, Terra Manasco, and David Propst of NMDGF; Deborah Sarabia of NMED; and Maryann McGraw of NMED.

A petition must include water quality data, including chemical, physical, or biological parameters, *if available*, to establish a baseline condition for the proposed ONRW. 20.6.4.9.A(3) NMAC. Petitioners will provide all water quality data available to the Agencies for the waters nominated. Ms. Sarabia will provide supporting testimony.

A petition must include a discussion of activities that might contribute to reduction of water quality in the proposed ONRW. 20.6.4.9.A(4) NMAC. Testimony on water quality data and activities that could contribute to a reduction in water quality will be given by Ms. Sarabia

A petition must include additional evidence to substantiate the designation, including a discussion of the economic impact of the designation on the local and regional economy within the state of New Mexico and the benefit to the state. 20.6.4.9.A(5) NMAC. I will provide testimony regarding the economic impact of the designation.

A petition must include an affidavit of public of notice of the petition in a newspaper of general circulation in the affected counties and in a newspaper of general statewide circulation,

20.6.4.9.A(6). As discussed earlier, affidavits of publication are included in Petitioners' Exhibit 32.

B. Benefit to the State

Under 20.6.4.9.B NMAC, the Commission may designate an ONRW where it determines that the designation is beneficial to the state and meets one or more of the other criteria in that regulatory provision. The Agencies charged with developing the ONRW proposal have nominated perennial streams, lakes, and wetlands within Forest Service Wilderness areas as a category of waters that should receive the highest level of water quality protection in the state. Designating the nominated waters as ONRWs will establish a foundation for long-term preservation and restoration of New Mexico's headwaters. Designation of the nominated waters would be beneficial to the state of New Mexico because protection of the quality of these waters (1) will help maintain a clean water supply for human uses, agricultural uses, and wildlife habitat within Wilderness areas within Wilderness areas and downstream uses by municipal water supply for domestic and industrial uses, domestic wells, agriculture, livestock watering, and recreational interests; (2) will help maintain healthy, functioning ecosystems, preserve habitat, support biodiversity, and protect endangered and threatened species; (3) will help maintain the recreational benefits in Wilderness areas; and (4) will help support the designated uses of the waters under the Commission's Standards for Interstate and Intrastate Surface Waters (Water Quality Standards ("WQS")), 20.6.4 NMAC.

New Mexico's population has grown by over 20% since 1990; at the same time, New Mexico has the third lowest annual average precipitation in the United States. Continuing increases in population, greater development, and continuing drought have put the state's water and natural resources under enormous strain. Natural resources, including water and watersheds,

minerals, rangelands and forests, play an important role in the state's economic and fiscal health. New Mexico Dept. of Agriculture Biennial Report, pp. 1-2 (July 2005 – June 2007) (Pet. Ex. 52). Like other arid western states, one of the most significant challenges facing New Mexico is developing a long-term strategy to protect and maintain our water resources in a way that is sustainable and economically supportable. These are not easy decisions, and maintenance of the status quo will not provide the solutions necessary to address future water needs. Water managers must look at all of the tools available to ensure that clean water stays clean and to improve the quality of the state's impaired waters. Ninety assessment units included in this proposal are listed as impaired on the state's Clean Water Act § 303(d) / § 305(b) Integrated Report. This indicates that, even in Wilderness areas, the state should be doing more to protect the quality of headwater streams. According to the Forest Service, water is the basis for many of the recreational and amenity values that people seek. Science indicates that water plays a key role in ecosystem function and processes. Adequate flow and water quality are essential to maintaining fish species and fisheries, which in turn are sources of many economic, cultural and spiritual values. Pet. Ex. 53 Water and the Forest Service (Forest Service 2000) (Pet. Ex. 53).

Several researchers have attempted to estimate the volume of water that flows from Forest Service managed lands. In a 2009 scientific paper, Brown, *et al.* estimated the mean annual contribution to water supplies from Forest Service Wilderness areas in Forest Service Region 3 (Arizona and New Mexico) to be 953 million meters cubed per year ("m^3/yr") or approximately 9% of the contribution from all land areas. Brown and Froemke, Estimated Mean Annual Contribution to Water Supply from Designated Wilderness in the Coterminous United States (Oct. 2009) (Pet. Ex. 54). In a 2008 article in the *Journal of the American Water Resources Association*, Brown, *et al.* estimated the water supplied by all Forest Service lands in

New Mexico to be 2,468 million m^3/yr, nearly half the total water supplied by all lands. Brown, *et al.,* Spatial Distribution of Water Supply in Coterminous United States, JAWRA, Vol. 44, No. 6 (Dec. 2008) (Pet. Ex. 55). Because forests are generally the source of high quality runoff, they play an extremely important role in the provision of water nationally and especially in the west. As private lands continue to be developed, public and other protected lands will grow in importance as sources of high quality runoff. *Id.*

Water that flows from Forest Service Wilderness areas is a critically important resource to the State. Yet, management of the quality of Wilderness waters has been largely left to the Forest Service, a federal government agency. While the Forest Service issues permits and makes management decisions on a regular basis that have the potential to impact the state's water resources, state water quality is not the federal government's principal consideration in managing federal lands and Wilderness areas. For example, protection of water quality is only one goal within the broad mission of the Forest Service. In a 2003 article published in the *New York Times*, Mike Dombeck, a professor of global environmental management and former chief of the Forest Service from 1997 to 2001, wrote that a century ago President Theodore Roosevelt recognized the vital connection between forests and water, yet in modern times this connection has been lost. When Mr. Dombeck was with the Forest Service, water rarely surfaced as a forest management issue. Dombeck, The Forgotten Forest Product: Water, *New York Times* (Jan. 3, 2003) (Pet. Ex. 56).

By their nature, undeveloped and pristine environments cannot be created, only destroyed. In much the same way that Wilderness benefits the public, the public can benefit from the increased scrutiny and higher level of protection that waters within Wilderness would receive though ONRW designation. Once water quality is degraded, it is often very expensive

and extremely difficult to restore. ONRW designation of waters within Forest Service Wilderness areas would provide further incentive to maintain the quality of these most special waters into the future for the benefit of humans and wildlife.

The state has a fundamental responsibility to current and future generations to ensure that headwaters are protected and managed in a manner that ensures that the state's priorities and interests regarding water quality are a primary consideration. ONRW designation provides the state with an additional tool to influence federal land management decisions that affect water quality to ensure protection of our waters.

C. Significant Attribute of Wilderness

A water is eligible for ONRW status if it is a significant attribute of a Wilderness area. 20.6.4.9.B NMAC. The Wilderness Act was enacted by Congress in 1964. *See* 16 USC §§ 1131-36. The Act is eloquent is its description of "wilderness":

> A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

16 USC 1131(c). Wilderness areas may only be designated by an act of Congress. A key goal of designating areas as Wilderness is to protect and preserve the land's "natural conditions." *Id.* A significant natural condition of any Wilderness area is the area's rivers, streams, lakes, and wetlands. Wilderness waters embody the recreational, ecological, geological, scientific, scenic

and historic values that the Act seeks to preserve and protect for future generations. *Id.*

Wilderness areas in Forest Service land in New Mexico have been designated primarily through three congressional acts: the initial 1964 act (designating the Gila, Pecos, San Pedro Parks, White Mountain, and Wheeler Wildernesses), a 1978 designation (designating the Chama River Canyon Wildernesses), and a 1980 designation (designating the Aldo Leopold, Apache Kid, Blue Range, Cruces Basin, Dome, and Latir Peak Wildernesses (and adding to the Gila, Pecos, Wheeler Peak, and White Mountain Wildernesses)). Pub. L. 88-577, 78 Stat. 890 (Sept. 3, 1964); Pub. L. 95-237, 92 Stat. 40 (Feb. 24, 1978); Pub. L. 96-550, 94 Stat. 3221 (Dec. 19, 1980). In the 1978 and 1980 designations, protection of each area's "watersheds" was one the purposes for which these areas were designated. Pub. L. 95-237, § 1(b); Pub. L. 96-550, § 101. Through these Wilderness designations, Congress recognized that these areas' watersheds are of "national interest" and significance. Pub. L. 95-237, § 1(b).

The waters within Wilderness are a significant attribute because of their ecological, recreational, scenic, scientific and historic value. This is especially true for New Mexico, an arid state, where surface waters are highly valued.

> Wilderness streams are a unique and valued resource, offering many of the "enduring benefits" envisioned by passage of the Wilderness Act of 1964. These benefits include fresh water and places to fish, relax, and enjoy nature; unique habitats for plants and animals; reference sites to judge direct and indirect impacts to our natural environment; and perhaps a place where we can learn how to be stewards of the land and water. Wilderness streams, because they are relatively unaffected by people compared to most other streams, present one of the best opportunities for learning about stream ecosystems and how they function. The value of wilderness streams as a place to learn and as an ecological benchmark to judge impacts is growing daily.

Davis, J, *et al.*. Monitoring Wilderness Stream Ecosystems. U.S. Dept. of Agriculture Forest Service Rocky Mountain Research Station, General Technical Report RMRS-GTR-70 (Jan. 2001).

Wilderness areas provide many important values to New Mexico. Wilderness areas are a source of abundant clean water, essential to human life, aquatic life, livestock, and wildlife. Wilderness areas provide important ecological services, including watershed protection, carbon storage, nutrient cycling, fish and wildlife habitat, and biodiversity. Wilderness areas provide important recreational services to New Mexicans, and are also valued by those who may never visit Wilderness, but who receive satisfaction from knowing that Wilderness is protected for future generations. Loomis, *et al.,* Economic Values of the U.S. Wilderness System, *International Journal of Wilderness*, Vol. 7, No. 1 (April 2001) (Pet. Ex. 57) .

Streams, lakes and wetlands are a significant attribute of Wilderness areas, especially in the arid southwest where water is an extremely precious resource. Water bodies provide important services and benefits within Wilderness including flood protection, recreation, ecological connectivity, scenery, and downstream uses. Additionally, water contributes to scenic, spiritual, therapeutic, and cultural values of Wilderness areas. Johnson, The Value of Wilderness Water, Adam Johnson (Aldo Leopold Inst., Aug. 2003) (Pet. Ex. 58). In a study conducted of the values of Wilderness, members of the public were surveyed and asked to rate the importance of various Wilderness benefits. The study showed that water quality is consistently the highest ranked benefit by the public. In the most recent surveys, 93% of respondents indicated that, "protecting water quality" is "very or extremely important". Ensuring clean air and water, protecting wildlife habitat and endangered species, and benefit to future generations are consistently rated as the five most important benefits of Wilderness. *The Multiple Values of Wilderness*, Chap. 7 (Pet. Ex. 59).

D. Discussion of Economic Impacts

A petition must include a discussion of the economic impact of designation on the local

and regional economy within the state. 20.6.4.9.A(5) NMAC. The proposed ONRW designation of waters within Forest Service Wilderness areas will have no detrimental economic impact on existing uses within Wilderness areas because there are no new requirements that will apply to existing activities. Therefore, existing economic benefits experienced by the various sectors that rely on the national forests are expected to continue into the future if the waters within Forest Service Wilderness areas are designated as ONRWs. According to the New Mexico Department of Agriculture, there are 93 grazing allotments that are located fully or partially within Wilderness areas included in the proposed designation. NMDA Map of Allotments in Forest Service Land (June 2010) ((Pet. Ex. 60. Under the Commission's current WQS, discharges from "preexisting land-use activities" that are controlled by best management practices ("BMPs") and do not have new or increased discharges are exempt from any additional requirements as a result of ONRW designation. 20.6.4.8.A(4)(e) NMAC. Petitioners do not propose to alter the protection given to existing uses under the current regulations, but propose to maintain this protection. For example, grazing conducted in an ONRW watershed in accordance with a permit issued by the Forest Service is considered a preexisting land use activity. The Forest Service already requires all grazing permittees to implement BMPs to protect water quality. *See* Forest Service Handbook Excerpts for Best Management Practices (Pet. Ex. 37). Therefore, the ONRW designation in Wilderness would not affect the current activities of grazing permittees, and there would be no economic impact on them as a result of the designation.

While designation is not expected to result in detrimental economic impacts to existing uses, designation may provide economic benefits to the state. By designating waters within Wilderness areas as ONRWs, the State of New Mexico takes an important step to ensure

protection of headwater streams that support wilderness uses such as livestock grazing and recreation, and ultimately feed downstream public drinking water supplies, agriculture, and other important uses. According to the Forest Service, national forest lands provide 14% of the runoff of the contiguous United States land area and the value of this water has been estimated at $3.7 billion per year. Water and the Forest Service (Forest Service 2000) (Pet. Ex. 53). Healthy watersheds filter contaminants from water, and provide other important benefits such as flood control and storm mitigation. These are valuable – but not easily valued – and irreplaceable services that are generally taken for granted. Additionally, the water retention and generation properties of forests are a contribution that cannot be quantified, but the economic viability of surrounding communities depends on this crucial resource. Socioeconomic Assessment of the Lincoln National Forest, p. 85 (UNM BBER June 2006) (Pet. Ex. 61).

As discussed, ONRW designation can help to protect wildlife habitat provided by designated waters. As well, the designation can help to preserve rivers and streams enjoyed by thousands of people annually. Although numbers are not available for recreational and wildlife uses of Wilderness areas alone, the state does derive a significant amount of revenues from fishing, hunting and wildlife-associated recreation. According to the United State Fish and Wildlife Service 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation for New Mexico (Pet. Ex. 62), 947,000 New Mexico residents and nonresidents 16 years old and older fished, hunted, or watched wildlife in New Mexico. In 2006, state residents and nonresidents spent $823 million on wildlife recreation in New Mexico. Of that total, trip-related expenditures were $430 million and equipment purchases totaled $283 million. Expenditures in 2006 for fishing alone exceeded $300 million. Pet. Ex. 62.

The current economic impact of national forests on the surrounding local and regional

economies has been thoroughly evaluated by the University of New Mexico's Bureau of Business and Economic Research ("BBER"). BBER has evaluated each of the five national forests that the 12 Wilderness areas subject to this proposal are located within: the Carson National Forest, Cibola National Forest, Gila National Forest, Lincoln National Forest, and Santa Fe National Forest.[12] The BBER reports describe the socioeconomic impact on forest users, and the impact of each forest on the surrounding local and regional economy. Petitioners' Exhibit 35 provides excerpts of key information and tables from the BBER reports that quantify the direct, indirect and induced financial benefits of ranching, timber harvesting, recreation and forest service operations on regional and local economies for each national forest. The BBER reports cover the full range of activities that occur within national forests. Because the nomination is for waters within Wilderness areas only where the range of activities is a subset of those that occur within the entire national forest, the economic benefits of existing activities in Wilderness areas are a subset of those for the entire national forest. No documentation was available from BBER or the Forest Service regarding economic benefits of Wilderness areas alone.

Within the Carson National Forest, recreation and tourism related activities contributed approximately $160 million (not including skiers), accounting for a substantial share of such activities in the area in 2004. In total, the Carson National Forest contributes directly and indirectly an estimated $414 million in output, 4,003 jobs and $89.3 million in income to the local economy. This is equivalent to nearly 9% of the 45,287 jobs in these areas in 2003. Visitor

[12] *See* UNM BBER, Socioeconomic Assessment of the Carson National Forest Submitted to the United States Forest Service Region 3 Office (July 2007); UNM BBER, Socioeconomic Assessment of the Cibola National Forest Submitted to the United States Forest Service Region 3 Office (June 2007); UNM BBER, Socioeconomic Assessment of the Gila National Forest Submitted to the United States Forest Service Region 3 Office (July 2007); UNM BBER, Socioeconomic Assessment of the Lincoln National Forest Submitted to the United States Forest Service Region 3 Office (July 2007); UNM BBER Socioeconomic Assessment of the Santa Fe National Forest Submitted to the United States Forest Service Region 3 Office (Aug. 2007) (Pet. Ex. 63 on CD).

spending is by far the largest source of activity, contributing a total of 83% of the employment labor income impacts. The most important economic aspect of the use of the Carson National Forest is the revenue generated by recreational visitors. Additionally, the Carson National Forest plays a key role in terms of water generation and retention, which is vital to the economic development of the arid southwest region. There are few economic activities that could be sustained without the water that is so closely associated with the Carson National Forest. According to BBER, water is ultimately the most significant economic contribution and risk associated with forest management in the Carson. BBER Carson Nat'l Forest Report, p. 90.

Within the Santa Fe National Forest, in 2004, there were the equivalent of 1,300 jobs that are directly related to visitors and recreation (not including skiing). The direct impacts from visitors and recreation generate $86 million annually. In total, the Santa Fe National Forest contributes directly or indirectly an estimated 2,379 jobs and $159 million in income to the local economy. Visitor spending is by far the largest source of activity, contributing a total of 69% of the employment and 65% of the labor income impacts. The city of Santa Fe is dependent on the forest setting provided by the Santa Fe National Forest that creates the scenic beauty for which the city is famous as a tourist destination. As with the Carson National Forest, water retention and generation benefits and the presence of rivers are ecologically and economically significant to the region. BBER Santa Fe Nat'l Forest Report, p. 97. While a larger degree of logging or ranching activity may occur in counties such as Sandoval, San Miguel, or Rio Arriba, Santa Fe County is the primary benefactor of the visitor spending impacts.

Visitor spending is the single most important contributor to the economic impact of Lincoln National Forest. In total, the Lincoln National Forest contributes directly or indirectly an estimated 2,618 jobs and $69.5 million in income to the regional economy. This is equivalent

to about 2.8% of the 93,356 jobs in these areas in 2003. Visitor spending is by far the largest source of activity, contributing a total of 71.4% of the employment and 58.9% of the labor income impacts. Recreational spending, not including skiing, contributes more than $115,000 which represents 68% of the total economic impact of the Lincoln National Forest. As in other national forests, a critical function of the mountain districts of the Lincoln National Forest is the generation and retention of water that supplies areas beyond the forest. The economic viability of communities in the region depends on this crucial resource. BBER Lincoln Report.

The principal economic activities on the Gila National Forest include ranching, timber harvesting, recreation and wildlife visits, and Forest Service operations. In total, the Gila National Forest contributes directly or indirectly an estimated 3,376 jobs and $63.9 million in income to the economies of the surrounding counties. This is equivalent to about 17.5% of the 19,245 jobs in these areas in 2002. Looking strictly at economic impacts, it is estimated that the Gila National Forest contributes to almost 18% of the assessment area economic activity in terms of employment. Visitor spending is by far the largest source of activity, contributing a total of 75% of the jobs associated with the national forest and 80% of the labor income impacts. According to the BBER, it is likely that the majority of this impact occurs in Catron and Grant Counties. The comparatively large contribution of recreational and visitor spending is a result of the number of people visiting the Gila National Forest. More than one million parties visited the Gila National Forest in 2001, which indicates a substantial degree of use. There are also ecological impacts from the forest that support economic activity in the area, including the water retention and generation properties of the forest. BBER Gila Report.

The impact of the Cibola National Forest is the most difficult to quantify for this nomination because of the widely divergent socioeconomic characteristics of the areas spanned by the forest.

However, the Cibola National Forest does make a substantial and significant contribution to the socioeconomic well-being of the area. Though visitor spending in the Sandia Ranger District, which is not included in this ONRW nomination, is the most significant contributor to the economic impact of the Cibola National Forest, ranching and Forest Service operations provide important and much needed economic activity in rural areas. The Magdalena Ranger District includes the Apache Kid Wilderness area. The Magdalena Ranger District is a source of economic development in the area, and provides opportunities for grazing and recreation. The Magdalena Ranger District is likely to attract more visitors in the future, including many who will seek new experiences in less travelled, less crowded areas and the tranquility offered by more remote locations. For small and rural communities, the presence of the Cibola National Forest supports the local economy by providing a valuable flow of forest dollars into rural communities from tourism.[13]

[13] The Arrowhead Center of New Mexico State University has completed economic base studies of each county in New Mexico. An economic base study is a descriptive tool used to analyze the composition of local economic activity. Though these studies do not provide information on the impact of Wilderness areas on the local economy, they do indicate whether base industries such as agriculture (farming, forestry, fishing related), tourism, and recreation are significant in the county. The following table provides a synopsis of information available in the Arrowhead Center studies.

County	Population Growth Rate 2003 to 2007	Per Capita Personal Income	Per Capita Income Growth Rate	Per Capita Income State Rank	Noted Base Industries
Catron	0.26%	$ 19,257	19.80%	30	ag-farming, forestry and fishing related; mining; utilities; real estate rental and leasing; federal civilian employment
Grant	-0.69%	$ 26,007	34.30%	15	mining; utilities; management of companies; ag-farming; tourism-accommodation and food services; state government employment
Lincoln	-0.48%	$ 25,100	21.97%	19	ag-farming, forestry and fishing related; mining; tourism-arts/entertainment/ recreation/accommodation/food services; real estate rental and leasing; retail trade
Mora	0.10%	$ 18,859	19.30%	31	ag-farming, forestry and fishing related; fed civilian employment

Information available from the Forest Service indicates that communities located near Wilderness benefit from Wilderness visitors who spend money in the local economy, and that amenities offered by Wilderness contribute to the quality of life of nearby residents. In addition to having access to outdoor activities such as fishing and hiking, one of the factors that attracts visitors and residents is a clean environment. Rudzitis, *et al.*, The Impact of Wilderness and Other Wildlands on Local Economies and Regional Development Trends (Forest Service Proceedings RMRS-P-15-Vol-2.2000) (Pet. Ex. 64). Research also indicates that natural and recreational amenities provided by public lands attract and retain people. The strongest correlation between prosperity and federal conservation lands such as Wilderness exists in rural

Rio Arriba	0.25%	$ 24,053	16.00%	21	ag-farming, forestry and fishing related; mining; health care and social assistance; arts/entertainment/recreation; fed civilian employment; state government employment
San Miguel	-0.30%	$ 25,290	21.40%	16	ag-farming, forestry and fishing related; health care and social assistance; state government employment
Sandoval	19.60%	$ 29,476	18.10%	7	manufacturing; information; arts/entertainment/recreation
Santa Fe	4.47%	$ 42,184	27.50%	2	tourism-accommodation and food services; arts/entertainment/recreation; real estate; professional and technical services; mining; state government employment;
Sierra	-5.75%	$ 23,508	30.00%	24	ag-farming, forestry and fishing related; tourism-accommodation and food services; arts/entertainment/recreation
Socorro	0.08%	$ 23,873	29.30%	23	ag-farming, forestry and fishing related; professional and technical services; fed civilian employment; state government employment
Taos	2.02%	$ 28,858	31.00%	9	arts/entertainment/recreation; tourism-accommodation and food services; real estate rental and leasing; ag-farming; mining; fed civilian employment
New Mexico	5.17%	$ 30,706	22.95%	--	---

The full Arrowhead Center study prepared for each of the counties that includes ONRW nominated waters can be found in Petitioners' Exhibit **. [DON'T KNOW WHY THIS IS HELPFUL]

communities. Rasker, *et al.,* The Economy of the Gila Region (Headwaters Economics, July 2008) (Pet. Ex. 65). Several New Mexico communities located in close proximity to Forest Service Wilderness use the amenities offered by a natural environment to attract visitors. For example, the Catron County Chamber of Commerce website, located near the Gila Wilderness, advertises recreational activities such as fishing, birding, and hiking along nominated stream trails such as Turkey Creek in the Gila National Forest in an effort to attract visitors. *See* http://www.catroncounty.org/parks.php. A tourism website for Ruidoso highlights the White Mountain Wilderness, including hiking on the South Fork Rio Bonito Trailhead and the Three Rivers Trailhead. http://www.ruidoso.net/visitors/outdoors/hiking.html (Pet. Ex. 66). Both streams are nominated. The United States Department of Agriculture has characterized all of the counties that contain Forest Service Wilderness areas as having a high natural amenities index, which characterizes the relationship between natural amenities and rural economic growth. McGranahan, Natural Amenities Drive Rural Population Change (USDA Economic Research Service, 1999) (Pet. Ex. 107). Though data is not available for New Mexico Wilderness areas specifically, the Forest Service has estimated the contribution of recreational use in United States Wilderness areas, primarily Forest Service Wilderness, at $3 billion annually. Cordell, *et al.,* Powerpoint, The Global Contribution of Protected Natural Landscapes Through Tourism (Forest Service) (Pet. Ex.67).

VIII. PROPOSED AMENDMENTS TO ANTIDEGRADATION POLICY

The second component of the Amended Petition are NMED's proposed amendments to the Commission's Antidegradation Policy set forth in 20.6.4.8.A(3) NMAC. Pursuant to NMSA 1978, § 74-6-4(C), NMED petitioned the Commission to amend the Antidegradation Policy in order to revise the standards framework for protection of surface waters of the state, including

ONRWs. The proposed revisions to the Antidegradation Policy are set forth in proposed amendments to 20.6.4.7 and -8.A NMAC, set forth in Petitioners' Exhibit 1-Sub.

A. Background

The state's Antidegradation Policy, 20.4.6.8.A NMAC, is divided into three paragraphs that conform to the three tiers of the federal antidegradation policy, as discussed previously. The Commission last amended Section 20.6.4.8 NMAC in 2007 to allow for "temporary and short-term degradation" of water quality in ONRWs for watershed restoration projects. In the 2007 hearing, NMED recommended and the Commission approved a limitation on temporary and short-term degradation, only allowing degradation that would result in the restoration or maintenance of the chemical, physical or biological integrity of the ONRW. NMED's intent was to ensure that watershed restoration projects could proceed in Tier 3 or ONRW waters.

The 2007 amendments adopted by the Commission, however, are more restrictive than EPA's Tier 3 requirements. EPA, while "supportive" of the 2007 amendments, did not approve them because the state's Antidegradation Implementation Procedures for Tier 3 waters were not sufficiently detailed. Oct. 23, 2008 ltr. from M. Flores, EPA, to R. Curry, NMED (Pet. Ex. 68). NMED provided draft Antidegradation Implementation Procedures for EPA review in 2009, and EPA expressed additional concerns regarding the state's approach of combining watershed restoration projects and temporary and short-term degradation into a single provision. Aug. 31, 2009 ltr. from J. Watson, EPA, to M. Leavitt, NMED (Pet. Ex. 68). EPA believed the two types of activities should be differentiated. *Id.* NMED proposes new amendments to the Antidegradation Policy in 20.6.4.8.A NMAC and detailed amendments to Antidegradation Implementation Procedures in order to address each of the concerns put forth by EPA. NMED's proposed amendments to the Antidegradation Policy and the Antidegradation Implementation

Procedures also address concerns raised during the public participation process. In addition, NMED has a concern that restricting activities that could result in temporary and short-term degradation in ONRWs to restoration projects may discourage and prevent additional nominations of ONRWs around the state. Therefore, NMED proposes including temporary and short-term degradation activities in and around ONRWs, accompanied by limitations on those activities to protect water quality, as allowed by EPA. NMED's proposed amendments to 20.6.4.7 and 20.6.4.8.A NMAC are set forth in Petitioners' Exhibit 1-Sub.

B. Proposed Amendments to 20.6.4.8.A(4) NMAC

Existing Paragraph (3) of Section 20.6.4.8.A NMAC addresses temporary and short-term degradation, but allows "short-term" degradation to extend beyond 12 months with Commission approval. The existing language only allows degradation that can be shown to result from the "restoration or maintenance of the chemical, physical or biological integrity of surface waters" or watershed restoration projects. NMED proposes to divide existing Paragraph (3) into two paragraphs that separate temporary and short-term degradation activities lasting weeks and months from longer-term degradation that may be associated with watershed restoration projects. New Paragraph (3) allows temporary and short-term degradation in ONRWs, not to exceed 6 months, consistent EPA guidance on Tier 3 waters. Water Quality Standards Handbook, § 4.7(Pet. Ex. 40). New Paragraph (4) applies only to watershed projects and allows degradation that may last longer than 6 months. New Paragraph (4) also applies to all surface waters, not just ONRWs.

NMED proposes this approach in order to respond to EPA's concern that the state's current approach in 20.6.4.8.A(3) NMAC -- of addressing both watershed restoration projects and temporary and short-term degradation in a single provision and only addressing such

activities in ONRWs -- is problematic. Aug. 31, 2009 ltr. from J. Watson, EPA, to M. Leavitt, NMED (Pet. Ex. 68). EPA suggested that the state's Antidegradation Policy should differentiate between watershed-scale longer-term restoration activities and localized temporary and short-term degradation activities. EPA also suggested that provisions relating to watershed projects should apply to all surface waters, not just ONRWs. New Paragraph (4) responds to EPA's comments, and would allow for degradation that might occur as a result of longer-term watershed projects intended to improve water quality over time, and would apply to all surface waters.

A typical watershed restoration project may include removal of non-native vegetation and reestablishment of the native riparian ecosystem. For many of these watershed restoration projects, there is a period of time during which sediment and turbidity increase because native vegetation has not yet been established. As NMED testified in the 2007 hearing before the Commission, this period of time can extend beyond a year, and may even last a number of years. While NMED's proposed language allows for watershed projects that may result in water quality degradation for a period of time, NMED proposes to build in protections to ensure that any such degradation is minimized to the maximum extent possible. NMED proposes to require that the degradation be limited to the shortest amount of time; be controlled by BMPs to minimize the duration, magnitude, frequency and cumulative effects of the degradation; and not result in water quality lower than necessary to protect any existing use in the surface water. NMED's proposal, therefore, would allow watershed restoration and remediation projects to go forward, acknowledges that some degradation of water quality may occur while the project is being established, but builds in protections to safeguard against unnecessary lowering of water quality during implementation of the project.

During a recent Commission meeting, a Commissioner asked whether ONRW designation would result in reduced water quality, presumably because watershed restoration would be limited in areas surrounding designated waters. NMED's proposed changes to 20.6.4.A.4 NMAC address this concern by decreasing obstacles to watershed restoration. NMED also surveyed surrounding states that have extensive ONRW designations, and found no evidence that ONRW designation has resulted in reduced water quality.

C. Proposed Amendments to 20.6.4.8.A(3) NMAC

As discussed above, existing Paragraph (3) of Section 20.6.4.8.A NMAC addresses temporary and short-term degradation to an ONRW resulting from watershed restoration and remediation projects. NMED proposes to amend Paragraph (3) to address temporary and short-term degradation to an ONRW resulting from projects other than watershed restoration and remediation projects. Temporary and short-term degradation to ONRWs was addressed by EPA in a preamble to its promulgation of water quality standards regulations, 40 CFR Part 131. 48 Fed. Reg. 51400, 51403 (Pet. Ex. 69). In the preamble, EPA explained that its regulations allow for "limited activities which result in temporary and short-term changes in water quality" in ONRWs.[14] EPA, also, has provided some, limited guidance to states on the circumstances under

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[14] EPA stated:

> [Section] 131.12(a)(3) [of Title 40 of the Code of Federal Regulations] dealing with the designation of outstanding National resource waters (ONRW) was changed to provide a limited exception to the absolute "no degradation" requirement. EPA was concerned that waters which properly could have been designated as ONRW were not being so designated because of the flat no degradation provision, and therefore were not being given special protection. The no degradation provision was sometimes interpreted as prohibiting any activity (including temporary or short-term) from being conducted. States may allow some limited activities which result in temporary and short-term changes in water quality. Such activities are considered to be consistent with the intent and purpose of an ONRW. Therefore, EPA has rewritten the provision to read ". . . that water quality shall be maintained and protected," and removed the phrase "No degradation shall be allowed . . . ."

48 Fed. Reg. at 51403.

which temporary and short-term degradation to an ONRW is permissible. Water Quality Standards Handbook, § 4.7.[15]

As a result of EPA's comments, NMED proposes to amend Paragraph (3) of 20.6.4.8.A NMAC to apply to temporary and short-term degradation to ONRWs, and not to require that such degradation be the result of watershed restoration activities, as is presently the case. Deleting this requirement not only responds to EPA's concerns, but to concerns from the Forest Service and a water association that certain projects that were necessary, such as replacement or repair of aging infrastructure, but that were not watershed restoration projects could not be undertaken. NMED's proposal allows such projects to go forward, but builds in protections to ensure that water quality is not unnecessarily impaired. NMED proposes to limit that any such degradation be limited to the shortest amount of time, not to exceed six months; be controlled by BMPs to minimize the duration, magnitude, frequency and cumulative effects of the degradation; and not result in water quality lower than necessary to protect any existing use in the ONRW. Given the protections proposed by NMED in this amendment, allowing a broader spectrum of

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[15] EPA states, in part:

> [Section 131.12(a)(3)] requires water quality to be maintained and protected in ONRWs. EPA interprets this provision to mean no new or increased discharges to ONRWs and no new or increased discharge to tributaries to ONRWs that would result in lower water quality in the ONRWs. The only exception to this prohibition, as discussed in the preamble to the Water Quality Standards Regulation (48 F.R. 51402). permits States to allow some limited activities that result in temporary and short-term changes in the water quality of ONRW. Such activities must not permanently degrade water quality or result in water quality lower than that necessary to protect the existing uses in the ONRW. It is difficult to give an exact definition of "temporary" and "short-term" because of the variety of activities that might be considered. However, in rather broad terms, EPA's view of temporary is weeks and months. not years. The intent of EPA's provision clearly is to limit water quality degradation to the shortest possible time. If a construction activity is involved, for example, temporary is defined as the length of time necessary to construct the facility and make it operational. During any period of time when, after opportunity for public participation in the decision, the State allows temporary degradation, all practical means of minimizing such degradation shall be implemented.

Water Quality Standards Handbook, § 4.7.

projects to go forward, sufficiently protects water quality in ONRWs.

NMED's proposal is consistent with EPA guidance that temporary and short-term degradation be limited to "weeks and months, not years." Water Quality Standards Handbook, § 4.7. The existing regulations allow the degradation to last no longer than 12 months, unless a longer time is approved by the Commission. 20.6.4.8.A(3)(b) NMAC. EPA, however, expressed concern that this provision could result in impacts to water quality persisting longer than necessary. April 9, 2007 ltr. from J. Watson, EPA, to M. Leavitt, NMED (Pet. Ex. 68). NMED's proposal, limiting degradation to six months, addresses EPA's concern and also eliminates the need for case-by case approval by the Commission of such projects.

NMED proposes to maintain the provision in this section that protects "preexisting land-use activities" so long as those activities are controlled by BMPs and no new or increased discharges occur after designation of an ONRW. *See* 20.6.4.8.A(3)(e) NMAC and Proposed 20.6.4.8.A(3)(b) NMAC. This provision was promulgated by the Commission in 2007 in order to ensure that existing uses, such as grazing permits, were not disturbed and in fact were exempted from more stringent ONRW requirements as long as BMPs were employed and increased discharges did not result. Presently, preexisting activities on Forest Service land such as grazing are subject to BMPs by Forest Service requirements. Therefore, the practices presently employed by existing uses on Forest Service land in Wilderness should not have to change as a result of the ONRW designation sought by Petitioners.

D. Proposed Amendments Regarding Oversight Agencies

Under NMED's proposal, decisions to allow watershed projects in any surface water or to allow temporary and short-term degradation in an ONRW would continue to be approved on a case-by-case basis by the government agency that has control over land use decisions where an

ONRW is located. NMED, however, proposes to redefine these government agencies from "designated management agencies" to "oversight agencies." *See* Proposed 20.6.4.7.SS NMAC. EPA had expressed concern that reference to "designated management agency" as defined by 40 CFR § 130.9(d) was not a correct use of that term as used in the federal regulation. April 9, 2007 ltr. from J. Watson, EPA, to M. Leavitt, NMED (Pet. Ex. 68). NMED proposes to use the term "oversight agency" instead.

NMED also proposes to allow oversight agencies to make decisions regarding watershed projects or temporary and short-term degradation in ONRWs without requiring the oversight agency to enter into a Commission-approved memorandum of understanding ("MOU") with NMED, as is now required. *See* 20.6.4.8.A(3)(c) NMAC. Any decision by an oversight agency to allow a project to go forward, however, would have to comply with the protections proposed in 20.6.4.8.A(3)(a)(i) – (iii) NMAC and 20.6.4.8.A(4)(a)(i) – (iii) NMAC. Setting forth the requirements for oversight agencies up front rather than requiring each oversight agency to negotiate its own MOU with NMED establishes for the public and the oversight agency clear expectations as to the circumstances under which projects may proceed. Setting forth the requirements up front also ensures consistency in the procedures that will be followed by oversight agencies. In addition, eliminating the MOU requirement reduces the burden on NMED, the oversight agency, and the Commission to negotiate and oversee agency-specific MOUs. NMED's proposed Antidegradation Implementation Procedures provide more detailed procedures for the oversight agency's decision-making, adding further protection. Amendments to the Antidegradation Implementation Procedures are discussed in more detail below, in Section VIII of my testimony. All of the MOU provisions recommended by NMED during the 2007 hearing before the Commission are included as requirements for oversight agencies in the

proposed Antidegradation Implementation Procedures.

IX. PROPOSED AMENDMENTS TO ANTIDEGRADATION IMPLEMENTATION PROCEDURES

As explained in the prior section, federal regulations promulgated under the CWA require each state to develop procedures to implement its antidegradation policy. New Mexico's Antidegradation Implementation Procedures are attached as Appendix I to the CPP, which was last approved by the Commission in December 2004.[16] New Mexico's Antidegradation Implementation Procedures apply to point source discharges regulated through a permit issued under the CWA, such as a National Pollutant Discharge Elimination System permit or NPDES permit. The Antidegradation Implementation Procedures do not apply to nonpoint source discharges. The procedures for nonpoint source discharges to ONRWs are proposed to be addressed in a new document, the Nonpoint Source Guidance, proposed in this Petition by NMED and addressed in Section IV below. [17] Because the proposed amendments to Antidegradation Implementation Procedures do not apply to only Wilderness areas, they have been written broadly to address potential future designations in other state waters. For example, the procedures reference road building, even though road building is not an activity that would occur in Wilderness. In crafting the proposed amendments to the Antidegradation Implementation Procedures, NMED has taken into consideration comments from the Forest Service and forest users, such as grazing permittees and acequia users, and has tried to address all concerns while also trying to ensure that the Antidegradation Implementation Procedures

[16] Amendments to the CPP must be approved by the Commission at an open meeting. While amendments to the CPP are not rules that are subject to the publication requirements of NMSA 1978, § 74-6-6(C) and the Guidelines for Commission Regulation Hearings, amendments to the Antidegradation Implementation Procedures were noticed in the same manner as the proposed amendments to the Commission's rules.

[17] While the state's Antidegradation Implementation Procedures are subject to EPA approval because they address permitted or point source discharges, the Nonpoint Source Guidance is not subject to EPA approval.

meet all water quality standard requirements.

Amendments to the Antidegradation Implementation Procedures proposed by NMED would implement NMED's proposed amendments to 20.6.4.8(A)(3), governing for temporary and short-term degradation of ONRWs, and 20.6.4.8(A)(4) NMAC, governing for degradation for watershed restoration projects in surface waters. NMED's proposed amendments to the Antidegradation Implementation Procedures are attached as Petitioners' Exhibit 2.

NMED's proposed amendments to the Antidegradation Implementation Procedures track NMED's proposed amendments to 20.6.4.8.A(3) NMAC and EPA guidance in its WQS Handbook, allowing temporary and short-term degradation in ONRWs only in limited circumstances. In addition to the requirements proposed by NMED in 20.6.4.8.A(3) NMAC, NMED proposes to include provisions that allow for approval of temporary and short-term degradation associated with construction and road building activities only during the period of construction and making the facility or road operational; that require reseeding of areas that need revegetation with native plants; revegetating at the earliest possible time but not later than the first full growing season; and that require NMED notification to the New Mexico Energy, Minerals and Natural Resources Department Mining and Minerals Division ("MMD") that mining activities that have the potential to impact an ONRW are not considered "minimal impact" activities. See proposed Antidegradation Implementation Procedures, § IV.2. In addition to the requirements proposed by NMED in 20.6.4.8.A(4) NMAC, relating to watershed restoration projects near ONRWs, NMED proposes in the Antidegradation Implementation Procedures that NMED may require in-stream monitoring for watershed restoration projects where degradation lasts longer than 6 months to ensure that water quality is sufficient to protect existing uses and that water quality is restored upon completion of the activity. NMED proposes

to amend the Antidegradation Implementation Procedures to include additional protections for ONRWs including monitoring of permitted discharges by the permittee to ensure that no pollutant load is added to the ONRW; evaluation of permitted discharges upstream of an ONRW to ensure the discharge will not lower water quality in an ONRW; activity-specific state certifications for NPDES and Dredge or Fill permits; requiring that permitted discharges to ONRW waters that are impaired to be fully controlled to mitigate the contribution of the discharge to the impairment; and providing that a ground water discharge permit not be issued if it will violate the Implementation Policy.

X. PROPOSED NONPOINT SOURCE GUIDANCE FOR ONRWS

NMED proposes that the Commission approve a new guidance document, entitled "Guidance for Nonpoint Source Discharges in Areas Designated as Outstanding National Resource Waters", which is Petitioners' Exhibit 3. The Nonpoint Source Guidance is intended to provide guidelines for NMED and oversight agencies to implement the Antidegradation Policy as it applies to nonpoint source discharges in ONRW areas. In crafting the Nonpoint Source Guidance, NMED has taken into consideration comments from the Forest Service and forest users, such as grazing permittees and acequia users, and has tried to address all concerns while also ensuring that the Guidance meets all water quality standard requirements. If approved by the Commission, the Nonpoint Source Guidance will be added as Appendix F to the New Mexico Nonpoint Source Management Plan ("NPS Management Plan"), a document approved by the Commission in 2009.[18] The vast majority of surface water quality impairments identified

[18] The full NPS Management Plan may be found at ftp://ftp.nmenv.state.nm.us/www/swqb/WPS/NPSPlan/WQCC-Approved2009NPSPlan.pdf. Like the Antidegradation Implementation Procedures, the Nonpoint Source Guidance must be approved by the Commission at an open meeting. While the Nonpoint Source Guidance is not a rule that is subject to the publication requirements of NMSA 1978, § 74-6-6(C) and the Commission's Guidelines for Regulation Hearings, the proposed Nonpoint Source Guidance was noticed in the same manner as the proposed

in New Mexico are due to nonpoint sources of water pollution. The Nonpoint Source Guidance addresses temporary and short-term degradation, new activities in ONRW areas that may affect water quality, the role of the oversight agencies in approving activities that may impact ONRWs, watershed restoration projects, and existing land uses. In addition to the requirements already set forth in proposed amendments to 20.6.4.8.A(3) and (4) NMAC, key elements of the Nonpoint Source Guidance proposed are:

1. Requires that nonpoint sources shall be minimized and controlled by implementing BMPs. BMPs are identified in the NPS Management Plan and the Forest Service Handbook. Relevant portions of the NPS Management Plan relating to BMPs are Petitioners' Exhibit 23 and the Forest Service Handbook is Petitioners' Exhibit 24. For grazing permits and other existing forest uses, NMED will not impose additional BMPS beyond what is required by the Forest Service.

2. Oversight agencies, such as the Forest Service, must ensure that actions it takes will not result in violations of Commission's WQS.

3. NMED and oversight agencies must coordinate with each other, and NMED will not duplicate the review and authorization activities of oversight agencies.

4. Oversight agencies must provide notice to NMED of projects that have the potential to degrade water quality in ONRWs; give NMED an opportunity to participate in the planning phases of such projects; establish a program for implementing BMPs; establish a program to monitor and evaluate projects; and establish a process to evaluate projects on a case-by-case basis.

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amendments to the Commission's rules.

5. NMED or the oversight agency may require monitoring by the discharger of watershed restoration projects that result in degradation lasting longer than 6 months. BMPs may be revised or augmented based on monitoring data.

6. Preexisting land use activities, authorized by state or federal law prior to ONRW designation, are not subject to new requirements as a result of ONRW designation so long as the discharge is controlled by BMPs. Grazing and other forest uses conducted in an ONRW watershed in accordance with a permit issued by the oversight agency prior to designation are considered preexisting land use activities.

7. Water quality impacts associated with acequia maintenance, repair and improvements are generally *de minimus,* and therefore such activities are generally exempt from ONRW requirements. Similarly, acequia operation is exempt from the requirements. In both cases, implementation of BMPs is encouraged.

8. Temporary and short-term degradation associated with construction or road building activities shall last no longer than the length of time necessary to construct the facility or road and make it operational. Such activities shall incorporate BMPs to minimize pollution.

Land management agencies such as the Forest Service have generally adopted detailed BMP guidance documents that are used for activities that occur within their jurisdiction. The BMP guidance used by the Forest Service is included in Exhibit 37. Additionally, NMED has developed BMPs for watershed protection and restoration projects (Pet. Ex. 36) and Energy, Minerals and Natural Resources Department has developed BMPS for forestry projects on non-federal lands (Pet. Ex. 70). These are living documents and are intended to represent the current science of protecting water quality. Additionally, because these BMP documents are "guidance", they provide flexibility for NMED or the appropriate oversight agency to give case-

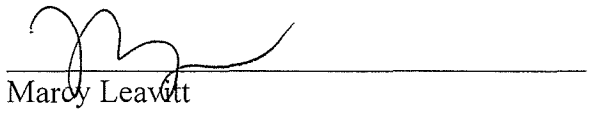
specific approval to other new or innovative BMPs that have not yet been included in guidance documents.

Several concerns have been raised by stakeholders that have been addressed in the Nonpoint Guidance. Concerns have been raised by the Forest Service and other stakeholders regarding third party litigation and Citizen suits filed under the authority of the Clean Water Act. Clean Water Act citizen suit provisions do not apply to nonpoint source discharges because they are not regulated under the Clean Water Act. The proposed nonpoint source guidance is not required by the Clean Water Act and is not part of the state's antidegradation policy or Antidegradation Implementation Procedures, and is therefore not subject to EPA approval or citizen suits. In addition to guiding oversight agencies, the guidance was developed to answer questions raised by the regulatory community regarding designation of waters as ONRWs, to provide clear guidance to nonpoint source dischargers regarding protection of water quality in ONRWs, and to emphasize the BMP approach to nonpoint source water quality protection. The guidance also states that waters impaired by nonpoint sources will be addressed through existing programs, such as Total Maximum Daily Loads and watershed restoration plans designed to mitigate nonpoint sources of water pollution.

Additional concerns raised by stakeholders included the impact of ONRW designation on water rights and rights held under the Treaty of Guadalupe Hidalgo. Water rights are not and cannot be affected by ONRW designation, by law. The New Mexico Water Quality Act at 74-6-12.A NMSA prohibits NMED and the Commission from undertaking any water quality activities that impair property rights in water. This prohibition has been in place since at least the 1970s and should remain in place for the future. Furthermore, ONRW designation does not impact cultural rights, land ownership or private property rights, or curtail existing land use activities.

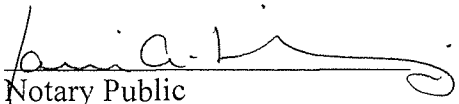
However, ONRW designation can help to protect water quality necessary to sustain traditional land uses.

I, Marcy Leavitt, swear that the foregoing is true and correct to the best of my knowledge, information and belief.



Marcy Leavitt

Subscribed and sworn to before me this 9th day of August, 2010 by Marcy Leavitt.



Notary Public

My commission expires:

4-11-13

Excerpt from the 2008 Triennial Review Order and Statement of Reasons for Amendment of Standards, WQCC 08-13(R), page 20.

D. Waters classified as ONRWs: The following waters are classified as ONRWs:

(1) Rio Santa Barbara, including the west, middle and east forks from their headwaters downstream to the boundary of the Pecos Wilderness; and

(2) the waters within the United States forest service Valle Vidal special management unit including:

(a) Rio Costilla, including Comanche, La Cueva, Fernandez, Chuckwagon, Little Costilla, Powderhouse, Holman, Gold, Grassy, LaBelle and Vidal creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit;

108. The Commission adopts the Department's proposal to add Powderhouse Creek to the list of waters included within the Valle Vidal ONRW designation because the designation applies to all waters within the Valle Vidal special management area, and Powderhouse Creek was erroneously omitted from the designation, notwithstanding its inclusion in the public notice of the petition.

109. This correction is in no way intended to establish a policy by the Commission for future ONRW petitions or oversights in designation.

(b) Middle Ponil creek, including the waters of Greenwood Canyon, from their headwaters downstream to the boundary of the Elliott S. Barker wildlife management area;

(c) Shuree lakes;

(d) North Ponil creek, including McCrystal and Seally Canyon creeks, from their headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit; and

(e) Leandro creek from its headwaters downstream to the boundary of the United States forest service Valle Vidal special management unit.

[20.6.4.9 NMAC - Rn, Subsections B, C and D of 20.6.4.8 NMAC, 05-23-05; A, 05-23-05; A, 07-17-05; A, 02-16-06]