STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

PETITIONERS' NOTICE OF INTENT TO SUBMIT TECHINCAL TESTIMONY

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") hereby file their Notice of Intent to Submit Technical Testimony in this matter pursuant to 20.1.6 NMAC and Procedural Order and Guidelines issued in this matter. In accordance with the rules and Procedural Order, Petitioners provide the following information:

1. Identify the person or entity for whom the witness(es) will testify:

The witnesses identified in this notice of intent all appear on behalf of Petitioners in this proceeding and in support of their Petition to designate the surface waters of the Upper Pecos Watershed as Outstanding National Resource Waters.

2. Identify each technical witness the person or entity intends to present, and state the qualifications of that witness, including a description of their education and work background:

Petitioners identify the following technical witnesses:

MS. GAYLE KILLAM: Ms. Killam is Principal of Water Policy Pathways. Ms. Killam's qualifications and resume describing her education and work background are attached in Petitioners' Exhibit 4. Ms. Killam will discuss the regulatory requirements for the nomination and will explain how the nominated waters meet the Outstanding National Resource Waters criteria at section 20.6.4.9 NMAC. Ms. Killam's full written testimony is attached in Petitioners' Exhibit 3.

MR. FRANK "PANCHO" ADELO: Mr. Adelo is President of the Upper Pecos Watershed Association, a Petitioner in this matter. Mr. Adelo's qualifications are attached in Petitioners' Exhibit 8. Mr. Adelo will discuss the broad public and community support for the designation and how the designation will be a benefit to the local community and to the State. Mr. Adelo's full written testimony is attached in Petitioners' Exhibit 7.

MR. RALPH VIGIL: Mr. Vigil is owner of Molino de la Isla Organics, LLC, a Petitioner in this matter. Mr. Vigil is also Chairman of the New Mexico Acequia Commission. Mr. Vigil's qualifications and resume describing his education and work background are attached in Petitioners' Exhibit 11. Mr. Vigil will discuss the support for the designation from the perspective a local small business owner and as a longstanding acequia user in the Watershed. Mr. Vigil's full written testimony is attached in Petitioners' Exhibit 10.

MR. NORMAN MAKTIMA: Mr. Maktima is the Head Guide at High Desert Anglers, a Santa Fe based fly-fishing shop and guide service. Mr. Maktima's qualifications describing his experience and work background are described in his full written testimony attached as Petitioners' Exhibit 12. Mr. Maktima will discuss his support for the designation from the perspective of a local fishing guide with strong ties to the Upper Pecos Watershed.

MR. BOB SIVINSKI: Mr. Sivinski is sole proprietor of RCS Southwest Consulting. Mr. Sivinski was formerly employed for 27 years by the New Mexico Energy, Minerals, and Natural Resources Department as a botanist and land conservation programs manager. Mr. Sivinski's qualifications and resume describing his education and work background are attached in Petitioners' Exhibit 14. Mr. Sivinski will discuss the ecological significance of the nominated area. Mr. Sivinski's full written testimony is attached in Petitioners' Exhibit 13.

Petitioners hereby present the following non-technical witnesses as well:

MR. KURT MORA: Mr. Mora is the Governor of Jemez Pueblo and will present a statement on behalf of the Pueblo of Jemez in support of the designation. Mr. Mora's testimony is attached as Petitioners' Exhibit 15.

MS. JANICE VARELA: Ms. Varela is a Commissioner for the San Miguel County Commission, a Petitioner in this matter. Ms. Varela's qualifications and resume describing her education and work background are attached in Petitioners' Exhibit 17. Ms. Varela will present a statement on behalf of the San Miguel County Commission in support of the designation. Ms. Varela's testimony is attached as Petitioners' Exhibit 16.

MR. TELESFOR "TED" BENAVIDEZ: Mr. Benavidez is the Mayor of the Village of Pecos, a Petitioner in this matter. Mr. Benavidez will present a statement on behalf of the Village of Pecos in support of the designation. Mr. Benavidez's testimony is attached as Petitioners' Exhibit 18.

MS. PAULA GARCIA: Ms. Garcia is the Executive Director of the New Mexico Acequia Association, a Petitioner in this matter. Ms. Garcia's qualifications and resume describing her education and work background are attached in Petitioners' Exhibit 20. Ms. Garcia will present a

statement on behalf of the New Mexico Acequia Association in support of the designation. Ms. Garcia's testimony is attached as Petitioners' Exhibit 19.

3. Attach the full direct testimony of each technical witness, which shall include an express basis for all expert opinion offered:

MS. GAYLE KILLAM: See attached Petitioners' Exhibit 3.

MR. FRANK "PANCHO" ADELO: See attached Petitioners' Exhibit **7**.

MR. RALPH VIGIL: See attached Petitioners' Exhibit 10.

MR. NORMAN MAKTIMA: See attached Petitioners' Exhibit 12.

MR. BOB SIVINSKI: See attached Petitioners' Exhibit 13.

Petitioners also attach the full direct testimony of each non-technical witness:

MR. KURT MORA: See attached Petitioners' Exhibit 15.

MS. JANICE VARELA: See attached Petitioners' Exhibit 16.

MR. TELESFOR "TED" BENAVIDEZ: See attached Petitioners' Exhibit 18.

MS. PAULA GARCIA: See attached Petitioners' Exhibit 19.

4. Include the text of any recommended modifications to the proposed regulatory change:

Witnesses support the proposed regulatory change as proposed by Petitioners in their initial filing on April 20, 2020, and attached hereto as Petitioners' Exhibit 1.

5. Identify and attach all exhibits to be offered by the person(s) at the hearing:

Exhibit	Description
1	Proposed Amendments to 20.6.4.9 NMAC
2	Petition of the Nomination of the Waters of the Upper Pecos Watershed as Outstanding National Resource Waters (as amended, September 23, 2020)[1]

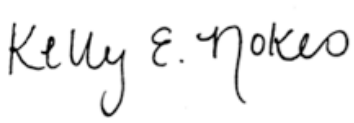
[1] Please note that two minor errors from the September 23, 2020 amended Petition have been corrected in the amended Petition attached hereto as Exhibit 1: (1) Table 2 on page 7 of the amended Petition had an error in the acreage of wetlands, which has been corrected; and (2) a

	a. Table 3: p. 8 b. Map 1 of Nominated Waters: p. 9 c. Map 2 of Nominated Waters: p. 10 d. Table 4: p. 18 e. Table 5: p. 21 f. Table 6: p. 22 g. Tables 7-17, pp. 23-26 h. Table 18: pp. 31-37 i. Appendix B: pp. 55-57 j. Appendix D: pp. 60-135 k. Appendix E: pp. 136-139
3	Technical Testimony of Gayle Killam
4	Resume of Gayle Killam
5	PowerPoint Presentation by Gayle Killam **[demonstrative exhibit]**
6	Excel Chart Demonstrating Nominated Waters Meet ONRW Criteria
7	Technical Testimony of Frank "Pancho" Adelo
8	Resume of Frank "Pancho" Adelo
9	Reference List of Select Letters of Support **[demonstrative exhibit]**
10	Technical Testimony of Ralph Vigil
11	Resume of Ralph Vigil
12	Technical Testimony of Norman Maktima
13	Technical Testimony of Bob Sivinski
14	Resume of Bob Sivinski
15	Non-technical Testimony of Kurt Mora
16	Non-technical Testimony of Janice Varela
17	Resume of Janice Varela
18	Non-technical Testimony of Telesfor "Ted" Benavidez
19	Non-technical Testimony of Paula Garcia
20	Resume of Paula Garcia
21	Video: "These Rivers Carry Our Stories: Outstanding Waters Protections in Pecos" **[available at: https://youtu.be/ahUFrQPO7Q8]**

Finally, Petitioners respectfully request that all cross-examination and questioning by Commissioners of the non-technical and technical witnesses be permitted by panel, with two separate panels for each group of witnesses, in accordance with the Procedural Order at Section (F)(b)(iii).

letter of support from Jemez Pueblo (referenced on page 16 of the amended Petition) was inadvertently omitted from Appendix A, and is now included in that appendix.

Respectfully submitted on this 10th day of March, 2021.



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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Notice of Intent to Submit Technical Testimony, and accompanying Exhibits were served by email to all parties on March 10, 2021.

Respectfully Submitted,

Kelly E. Nokes

Kelly E. Nokes

PETITIONERS' EXHIBIT

1

20.6.4.9 OUTSTANDING NATIONAL RESOURCE WATERS:

A. Procedures for nominating an ONRW: Any person may nominate a surface water of the state for designation as an ONRW by filing a petition with the commission pursuant to the guidelines for water quality control commission regulation hearings. A petition to designate a surface water of the state as an ONRW shall include:

(1) a map of the surface water of the state, including the location and proposed upstream and downstream boundaries;

(2) 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 criteria listed in Subsection B of this section;

(3) water quality data including chemical, physical or biological parameters, if available, to establish a baseline condition for the proposed ONRW;

(4) a discussion of activities that might contribute to the reduction of water quality in the proposed ONRW;

(5) any additional evidence to substantiate such a 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; and

(6) affidavit of publication of notice of the petition in a newspaper of general circulation in the affected counties and in a newspaper of general statewide circulation.

B. Criteria for ONRWs: 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 a state special trout water, 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 and contact uses and the human health-organism only criteria, and the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource.

C. Pursuant to a petition filed under Subsection A of this section, the commission may classify a surface water of the state or a portion of a surface water of the state as an ONRW if the criteria set out in Subsection B of this section are met.

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;

(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.

(3) the named perennial surface waters of the state, identified in Subparagraph (a) below, located within United States department of agriculture forest service wilderness. Wilderness are those lands designated by the United States congress as wilderness pursuant to the Wilderness Act. Wilderness areas included in this designation are the 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.

(a) The following waters are designated in the Rio Grande basin:

(i) in the Aldo Leopold wilderness: Byers Run, Circle Seven creek, Flower canyon, Holden Prong, Indian canyon, Las Animas creek, Mud Spring canyon, North Fork Palomas creek, North Seco creek, Pretty canyon, Sids Prong, South Animas canyon, Victorio Park canyon, Water canyon;

(ii) in the Apache Kid wilderness Indian creek and Smith canyon;

(iii) in the Chama River Canyon wilderness: Chavez canyon, Ojitos canyon, Rio Chama;

(iv) in the Cruces Basin wilderness: Beaver creek, Cruces creek, Diablo creek, Escondido creek, Lobo creek, Osha creek;

(v) in the Dome wilderness: Capulin creek, Medio creek, Sanchez canyon/creek;

(vi) in the Latir Peak wilderness: Bull creek, Bull Creek lake, Heart lake, Lagunitas Fork, Lake Fork creek, Rito del Medio, Rito Primero, West Latir creek;

(vii) in the Pecos wilderness: Agua Sarca, Hidden lake, Horseshoe lake (Alamitos), Jose Vigil lake, Nambe lake, Nat lake IV, No Fish lake, North Fork Rio Quemado, Rinconada, Rio Capulin, Rio de las Trampas (Trampas creek), Rio de Truchas, Rio Frijoles, Rio Medio, Rio Molino, Rio Nambe, Rio San Leonardo, Rito con Agua, Rito Gallina, Rito Jaroso, Rito Quemado, San Leonardo lake, Santa Fe lake, Santa Fe river, Serpent lake, South Fork Rio Quemado, Trampas lake (East), Trampas lake (West);

(viii) in the San Pedro Parks wilderness: Agua Sarca, Cañon Madera, Cave creek, Cecilia Canyon creek, Clear creek (North SPP), Clear creek (South SPP), Corralitos creek, Dove creek, Jose Miguel creek, La Jara creek, Oso creek, Rio Capulin, Rio de las Vacas, Rio Gallina, Rio Puerco de Chama, Rito Anastacio East, Rito Anastacio West, Rito de las Palomas, Rito de las Perchas, Rito de los Pinos, Rito de los Utes,

Rito Leche, Rito Redondo, Rito Resumidero, San Gregorio lake;

(ix) in the Wheeler Peak wilderness: Black Copper canyon, East Fork Red river, Elk lake, Horseshoe lake, Lost lake, Sawmill creek, South Fork lake, South Fork Rio Hondo, Williams lake.

(b) The following waters are designated in the Pecos River basin:

(i) in the Pecos wilderness: Albright creek, Bear creek, Beatty creek, Beaver creek, Carpenter creek, Cascade canyon, Cave creek, El Porvenir creek, Hollinger creek, Holy Ghost creek, Horsethief creek, Jack's creek, Jarosa canyon/creek, Johnson lake, Lake Katherine, Lost Bear lake, Noisy brook, Panchuela creek, Pecos Baldy lake, Pecos river, Rio Mora, Rio Valdez, Rito Azul, Rito de los Chimayosos, Rito de los Esteros, Rito del Oso, Rito del Padre, Rito las Trampas, Rito Maestas, Rito Oscuro, Rito Perro, Rito Sebadilloses, South Fork Bear creek, South Fork Rito Azul, Spirit lake, Stewart lake, Truchas lake (North), Truchas lake (South), Winsor creek;

(ii) in the White Mountain wilderness: Argentina creek, Aspen creek, Bonito creek, Little Bonito creek, Mills canyon/creek, Rodamaker creek, South Fork Rio Bonito, Turkey canyon/creek.

(c) The following waters are designated in the Gila River basin:

(i) in the Aldo Leopold wilderness: Aspen canyon, Black Canyon creek, Bonner canyon, Burnt canyon, Diamond creek, Falls canyon, Fisherman canyon, Running Water canyon, South Diamond creek;

(ii) in the Gila wilderness: Apache creek, Black Canyon creek, Brush canyon, Canyon creek, Chicken Coop canyon, Clear creek, Cooper canyon, Cow creek, Cub creek, Diamond creek, East Fork Gila river, Gila river, Gilita creek, Indian creek, Iron creek, Langstroth canyon, Lilley canyon, Little creek, Little Turkey creek, Lookout canyon, McKenna creek, Middle Fork Gila river, Miller Spring canyon, Mogollon creek, Panther canyon, Prior creek, Rain creek, Raw Meat creek, Rocky canyon, Sacaton creek, Sapillo creek, Sheep Corral canyon, Skeleton canyon, Squaw creek, Sycamore canyon, Trail canyon, Trail creek, Trout creek, Turkey creek, Turkey Feather creek, Turnbo canyon, West Fork Gila river, West Fork Mogollon creek, White creek, Willow creek, Woodrow canyon.

(d) The following waters are designated in the Canadian River basin: in the Pecos wilderness Daily creek, Johns canyon, Middle Fork Lake of Rio de la Casa, Middle Fork Rio de la Casa, North Fork Lake of Rio de la Casa, Rito de Gascon, Rito San Jose, Sapello river, South Fork Rio de la Casa, Sparks creek (Manuelitas creek).

(e) The following waters are designated in the San Francisco River basin:

(i) in the Blue Range wilderness: Pueblo creek;

(ii) in the Gila wilderness: Big Dry creek, Lipsey canyon, Little Dry creek, Little Whitewater creek, South Fork Whitewater creek, Spider creek, Spruce creek, Whitewater creek.

(f) The following waters are designated in the Mimbres Closed basin: in the Aldo Leopold wilderness Corral canyon, Mimbres river, North Fork Mimbres river, South Fork Mimbres river.

(g) The following waters are designated in the Tularosa Closed basin: in the White Mountain wilderness Indian creek, Nogal Arroyo, Three Rivers.

(h) The wetlands designated are identified on the *Maps and List of Wetlands Within*

United States Forest Service Wilderness Areas Designated as Outstanding National Resource Waters published at the New Mexico state library and available on the department's website.

(4) all named and unnamed surface waters of the Pecos River and its tributaries in the Upper Pecos Watershed that span from the U.S. Forest Service Dalton Fishing/Day Use area, approximately six miles north of the Village of Pecos, upstream to the Pecos Wilderness boundary, including the main stem of the Pecos River and all perennial, intermittent, and ephemeral streams, wetlands, and tributaries (named and unnamed). In addition to all unnamed waters, the designated waters include the following named tributaries: Jack's Creek, Panchuela Creek, Winsor Creek, Carpenter Creek, Rio Mora, Bear Creek, Willow Creek, Davis Creek, Doctor Creek, Holy Ghost Creek, Indian Creek, Sawyer Creek, Mancho Canyon Creek, Dalton Canyon Creek, and Wild Horse Creek.

[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; A, 12-01-10; A, 01-14-11]

PETITIONERS' EXHIBIT

2

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

AMENDED EXHIBIT 1

NOMINATION OF THE WATERS OF THE UPPER PECOS WATERSHED AS OUTSTANDING NATIONAL RESOURCE WATERS

AS AMENDED, SEPTEMBER 2020

Petitioners:

San Miguel County, State of New Mexico

Village of Pecos New Mexico

New Mexico Acequia Association

Pecos, New Mexico Molino de la Isla Organics LLC

Upper Pecos Watershed Association

NOMINATION OF THE WATERS OF THE UPPER PECOS WATERSHED AS OUTSTANDING NATIONAL RESOURCE WATERS [AS AMENDED, SEPTEMBER 2020]

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

I. INTRODUCTION AND BACKGROUND

This is a petition for regulatory change to the State of New Mexico Water Quality Control Commission ("WQCC") seeking designation of the waters of the Pecos River and its tributaries in the Upper Pecos Watershed as an Outstanding National Resource Water ("ONRW").

Petitioners San Miguel County, the Village of Pecos, the New Mexico Acequia Association, Molino de la Isla Organics LLC, and the Upper Pecos Watershed Association (collectively "Petitoners"), are nominating all perennial, intermittent, and ephemeral streams and wetlands (whether named or unnamed) within the geographic proposal boundary identified in Map 1 (streams) and Map 2 (wetlands) below. The watershed within this boundary encompasses the mainstem of the Pecos River from the U.S. Forest Service Dalton Fishing/Day Use area ("Dalton site") upstream to the boundary of the Pecos Wilderness, fifteen named tributaries from their confluence with the Pecos River upstream to their headwaters or to the Pecos Wilderness boundary (whichever comes first), and unnamed streams and wetlands that are part of the watershed as a whole.

"Agua es vida," and the waters of the Upper Pecos Watershed sustain and enrich the lives and livelihoods of all who live, work, and recreate there. These waters are among New Mexico's most outstanding aquatic resources for people, plants, and animals alike. For centuries, the Watershed has supported thriving ecosystems and communities. For generations, the Upper Pecos supported the Pecos Pueblo peoples and to this day remains culturally significant to their descendants. The Upper Pecos supports a rich tradition of farming and ranching and other traditional uses, all of which depend on clean water. Thanks in part to a long history of respect and stewardship among those who call the area home, most of the waters of the Upper Pecos remain clean and healthy. The high quality waters of the Upper Pecos also support numerous plants and animals, including New Mexico's state fish — the Rio Grande Cutthroat Trout — and are significant attributes of state Special Trout Waters, the Pecos Wilderness, and the designated Wild and Scenic portion of the Pecos River.

One of the most effective ways to deliver on the promise of clean and healthy water for present and future generations is to protect our cleanest and most ecologically and recreationally significant and valued waters as ONRWs. The Clean Water Act also called for this protection in it's opening words, declaring a primary objective "to restore and maintain the physical, chemical, and biological integrity of the Nation's waters."[1]

ONRW designations are not new to New Mexico. The WQCC has previously designated three ONRWs in the state: (1) the Rio Santa Barbara (2004); (2) the waters of the Valle Vidal (2005); and (3) all perennial waters within U.S. Forest Service Wilderness Areas in New Mexico (2010). Together, these ONRWs protect 1.4 million acres of watersheds, 700 miles of perennial rivers

[1] 33 U.S.C. § 1251.

and streams, 29 lakes, and 5,400 acres of wetlands in the state. Indeed, portions of the Pecos River and its tributaries — those within the Pecos Wilderness — are already designated as ONRWs.[2]

The New Mexico Acequia Association, San Miguel County, and the Village of Pecos have all passed resolutions to join the Upper Pecos Watershed Association as Petitioners in nominating the waters of the Upper Pecos Watershed as ONRWs. Each of these resolutions (see Appendix A) provides valuable insight into the critical importance of the nominated waters to Petitioners, and to the State.

II. AFFORDING PROTECTIONS AT THE UNIFIED, WATERSHED SCALE

Petitioners seek ONRW designation for all surface waters of the Upper Pecos Watershed as described above and within the geographic proposal boundary identified in Maps 1 and 2 below. Petioners' love for these waters, and the values that animate this love, are tied to the integrity of the watershed as a unified whole. Accordingly, the nomination includes, whether named or unnamed, all perennial, intermittent, and ephemeral surface waters, including rivers, streams, tributaries, lakes, and wetlands.

The interconnected surface waters of the Upper Pecos Watershed are the basis of the critical bioregional importance of this watershed to Petitioners and the State.[3] All of these waters, taken together, form a uniquely significant ecosystem in New Mexico. The individual, diverse characteristics of each specific surface water that comprise this nomination do not exist in a vaccum, isolated from each other, but rather are contingent on each other and the synergistic combination they form as a watershed — a watershed that provides valuable ecological functions, high quality habitat to threatened, endangered, and special status species, and significant recreational and economic resources, not only to the local communities within the watershed, but also to the State of New Mexico as a whole. Put simply, the whole of the Upper Pecos Watershed is greater than the sum of its individual surface water segments.

A. Scientific Basis

The connection between upstream and downstream functions and impacts forms an integrated, complete watershed system that underscores the imperative to fully protect all waters of the Upper Pecos Watershed with consistently applied ONRW standards.[4] As explained by J. David

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[2] § 20.6.4.9(D)(3) NMAC (2018).

[3] *See* Robert W. Adler, Addressing Barriers to Watershed Protection, 25 Envtl. L. 973 at 981 (1995) (describing the varying definitions of a "bioregion," including "a bioregion is 'a geographical province of marked ecological and often cultural unity, its subdivisions … often delimited by watersheds (water divides) of major streams;' and/or as "'a place defined by its life forms, its topography and its biota, rather than by human dictates; a region governed by nature, not legislature." (internal citations omitted)); *See also infra* Part IV, Section 2.1 Benefit to the State.

[4] *See* Robert W. Adler, Addressing Barriers to Watershed Protection, 25 Envtl. L. 973 at 981 (1995) (explaining that "actions and decisions affecting the headwaters of a watershed cannot be divorced from impacts downstream (and vice versa)" … and that "water bodies cannot be viewed simply as the water within the banks of a river or the shores of a lake, but are connected ecologically to the immediate floodplain and riparian ecosystem and to natural or artificial land conditions further upland" (internal citation omitted)); *see also id.* ("According to the Natural Research Council Restoration Committee, '[l]akes, streams, rivers, ponds, ground water, estuaries, and wetlands are interconnected parts of larger landscapes,' and restoration programs must be coordinated on a regional or watershed scale. The Committee emphasized the need to restore aquatic ecosystem structure and function on a watershed or

Allen and Maria M. Castillo in their seminal text on stream ecology: "Certain processes and properties emerge at the level of the whole ecosystem, including the flow of energy through food webs, the cycling of carbon and nutrients such as nitrogen and phosphorus, and the origin, processing, and transport of materials from headwaters to sea."[5]

They explain how principals of fluvial systems are manifested on three planes of influence in the watershed: (1) longitudinally (high to low gradient); (2) laterally (use of the floodplain); and (3) vertically (between groundwater and surface water).[6] A watershed-scale ONRW designation, such as that which is nominated here, addresses all of these planes of influence.

The essential ecosystem functions and services of watersheds are numerous and include: nutrient cycling, carbon storage, erosion and sediment control, increased biodiversity, soil formation, wildlife corridors, water storage and filtration, flood control, food, timber, forage, recreation, and reduced vulnerability to the effects of climate change.[7] By designating the Upper Pecos Watershed as an ONRW, the antidegradation protections that the designation provides will protect the functions of the entire watershed, as well as its unique, individual parts and will set the stage for activities that restore or maintain water quality into the future.[8]

In his article applying the principles of landscape ecology to riverine ecosystems, John Wien argues that rivers and streams are seen as the "epitome of connectivity, as so much of what goes on is tied to water flow and hydrology, and water (generally) flows downhill. The river continuum concept (Vannote et al., 1980) emphasizes the longitudinal linkage of ecosystem processes in streams and rivers through the downstream flows of water and materials, but it is a simplistic view of the actual patterns of connectedness and variations in flows and deposition that occur in a river."[9]

Because a healthy watershed depends on all of its hydrologic components, the inclusion and protection of ephemeral and intermittent streams (named and unnamed) preserves the integrity of the watershed. In New Mexico, 88% of the state's streams are either ephemeral or intermittent.[10] The flows and floods from those ephemeral and intermittent streams play a major role in shaping the dynamic hydrology of New Mexico's relatively few perennial reaches,[11] and the Pecos River is no exception. Additionally, the sediment and nutrients transported downstream from ephemeral and intermittent streams contribute to downstream river productivity.[12] And, not to be overlooked, the riparian habitats provided by ephemeral and intermittent streams support a vast array of aquatic, wildlife, and plant species that are

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ecosystem basis and not simply to address symptoms of harm through isolated projects." (internal citations omitted)).

[5] J.David Allan & Maria M. Casttillo, STREAM ECOLOGY, STRUCTURE AND FUNCTION OF RUNNING WATERS, SECOND EDITION (2007).

[6] *Id.*

[7] Laura Dlugolecki, U.S. Environmental Protection Agency, Healthy Watersheds Program, Economic Benefits of Protecting Healthy Watersheds: A Literature Review (June 2012).

[8] §§ 20.6.4.8(A)(3), (4) NMAC (2018).

[9] J. Wiens, *Riverine landscapes: Taking Landscape Ecology Into the Water*, 47 Freshwater Biology 501–515 (2002).

[10] U.S. Environmental Protection Agency, Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence at B-37 (Jan. 2015).

[11] *Id.*

[12] *Id.*

interdependent components of the ecosystem.[13] By 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 subwatersheds 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.

A healthy watershed, protected as a whole, performs key functions that support indigenous sensitive species through vulnerable life stages and irregular climatic conditions. Watershed integrity has been described as the "capacity of a watershed to support and maintain the full range of ecological processes and functions essential to the sustainability of biodiversity and of the watershed resources and services provided to society."[14] Just as the ecological and human uses of a watershed are inextricable, so too must be the commitment to long term sustainability of healthy watershed functions through effective, consistent, and science-based protection.

B. Management Efficiency

It is not a coincidence that the health of the Upper Pecos Watershed as a whole is tied to the community, cultural, and economic values that motivate Petitioners to seek an ONRW designation for the Upper Pecos Watershed. Petitioners view the Upper Pecos Watershed from a singular, all-inclusive, and bioregional perspective. The Upper Pecos Watershed supports a long tradition of local farming and ranching, as well as a vibrant recreation economy. Petioners' enjoyment of the rich biodiversity of the region is based upon the interconnected nature of the various streams, creeks, and rivers combining and flowing together downstream at any given time of the year. It is the collective whole that makes the Upper Pecos Watershed a truly significant place to live, work, visit, and play, and thus, of immense benefit to New Mexico.

Designating an ONRW on the basis of a defined geographic boundary encompassing a cohesive set of individual surface water segments is consistent with New Mexico's ONRW designation criteria and far from a novel approach in New Mexico. The 2005 Valle Vidal special management unit ONRW designation includes all surface waters in the management area, and the 2010 U.S. Forest Service Wilderness area ONRW designations include all named perennial surface waters within the boundaries of their respective management areas.[15]

The Upper Pecos Watershed nomination follows this same approach, seeking to protect the integrity of the entire system and to preserve the ecological, recreational, and economic significance of the bioregion as a whole via ONRW designation. This approach is also premised on the value of the Upper Pecos Watershed as an interconnected whole to the State, the exceptional recreational and ecological significance of the watershed, the presence of high quality waters across the watershed that retain immense value as a natural resource, and the historical, cultural, economic, recreational, and ecological values that are woven together by the presence of water. All of these elements are described in further detail in Part IV, Sections 2 and 5 below. Section 3 provides complementary discussion of water quality data and Section 4

[13] *Id.* at B-55.
[14] J. E. Flotemersch et. al, *A Watershed Integrity Definition and Assessment Approach to Support Strategic Management of Watersheds*, 32:7 River Research & Applications 1654–71 (2016).
[15] §§ 20.6.4.9(D)(2), (3) NMAC (2018).

discusses activies that might contribute to the degradation of water quality in the watershed, underscoring why designation of the Upper Pecos Watershed as an ONRW is warranted.

The Upper Pecos supports a tradition of farming and ranching uses, all of which depend on clean water.

An ONRW designation would amplify current, existing uses in the Upper Pecos Watershed by ensuring the protection and restoration of current water quality into the future.

III. REQUIREMENTS AND CRITERIA FOR NOMINATION

The requirements for nominating an ONRW are contained in § 20.6.4.9 NMAC (2018) as follows:

A. Procedures for nominating an ONRW: Any person may nominate a surface water of the state for designation as an ONRW by filing a petition with the commission pursuant to the guidelines for water quality control commission regulation hearings. A petition to designate a surface water of the state as an ONRW shall include:

(1) a map of the surface water of the state, including the location and proposed upstream and downstream boundaries;

(2) 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 criteria listed in Subsection B;

(3) water quality data including chemical, physical or biological parameters, if available, to establish a baseline condition for the proposed ONRW;

(4) a discussion of activities that might contribute to the reduction of water quality in the proposed ONRW;

(5) any additional evidence to substantiate such a designation, including an analysis 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; and

(6) affidavit of publication of notice of the petition in a newspaper of general circulation in the affected counties and in a newspaper of general statewide circulation.

B. Criteria for ONRWs: 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 a state special trout water, 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 and contact uses and the human health-organism only criteria, and the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource.

§ 20.6.4.9 NMAC (2018) (emphasis added).

IV. NOMINATION OF THE UPPER PECOS WATERSHED AS AN ONRW

SECTION 1: MAPS OF THE PROPOSED DESIGNATION

This petition nominates all named and unnamed surface waters of the Pecos River and its tributaries in the Upper Pecos Watershed contained with the geographic boundaries identified in Map 1 (streams) and Map 2 (wetlands) below. This boundary was defined by identifying all surface waters beginning from the U.S. Forest Service Dalton Fishing/Day Use area, upstream to the Wilderness boundary, or alternatively, to their headwaters, whichever comes first. The nominated waters include 14.11 miles of the mainstem of the Pecos River and all perennial, intermittent, and ephemeral streams, wetlands, and tributaries (named and unnamed).[16]

The southern reach of the nominated area, the U.S. Forest Service Dalton Fishing and Day Use area, is 6 miles north of the Village of Pecos on NM Highway 63. The northern reach, at the Pecos Wilderness boundary near Jack's Creek, is approximately 13 road-miles and 14.1 river-miles north of the Dalton site via Highway 63. The nominated area includes 6 miles of the Pecos River that is already designated as a Wild and Scenic River, pursuant to the Wild and Scenic Rivers Act.[17] The tables and maps below illustrate the nominated area in detail.

Table 1: Stream Miles in Proposal.

STREAM MILES IN PROPOSAL			
Stream Type	Named Tributaries	Unnamed Tributaries	Total
Perennial	55.55	0.12	55.67
Intermittent	9.64	0.00	9.64
Ephemeral	4.89	109.72	114.61
Lake/Marsh Centerline	0.12	0.00	0.12
All Types	70.20	109.83	180.04

Table 2: Total Acres and Miles.

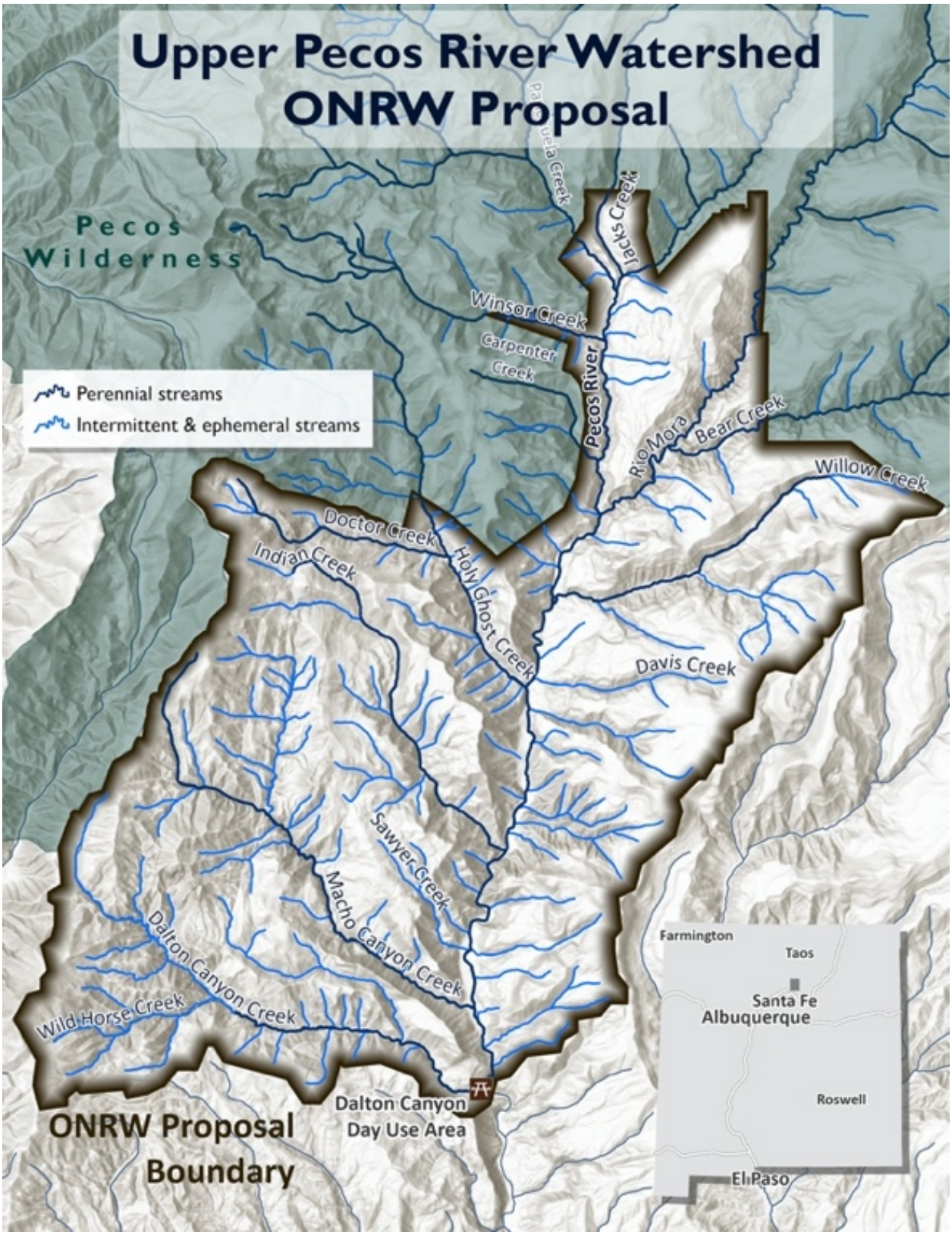
TOTALS	
Total Acreage in proposal	51,820
Total mileage in proposal	180.04
Acres of wetlands	557.24

[16] Some of these tributaries include sections that are already designated as ONRWs under § 20.6.4.9(D)(3)(b) NMAC (2018) ("Waters Classified as ONRWs"). This petition nominates and identifies the mileage of the sections of the listed tributaries that are not yet designated as ONRWs.
[17] 16 U.S.C. § 1271, *et seq*.

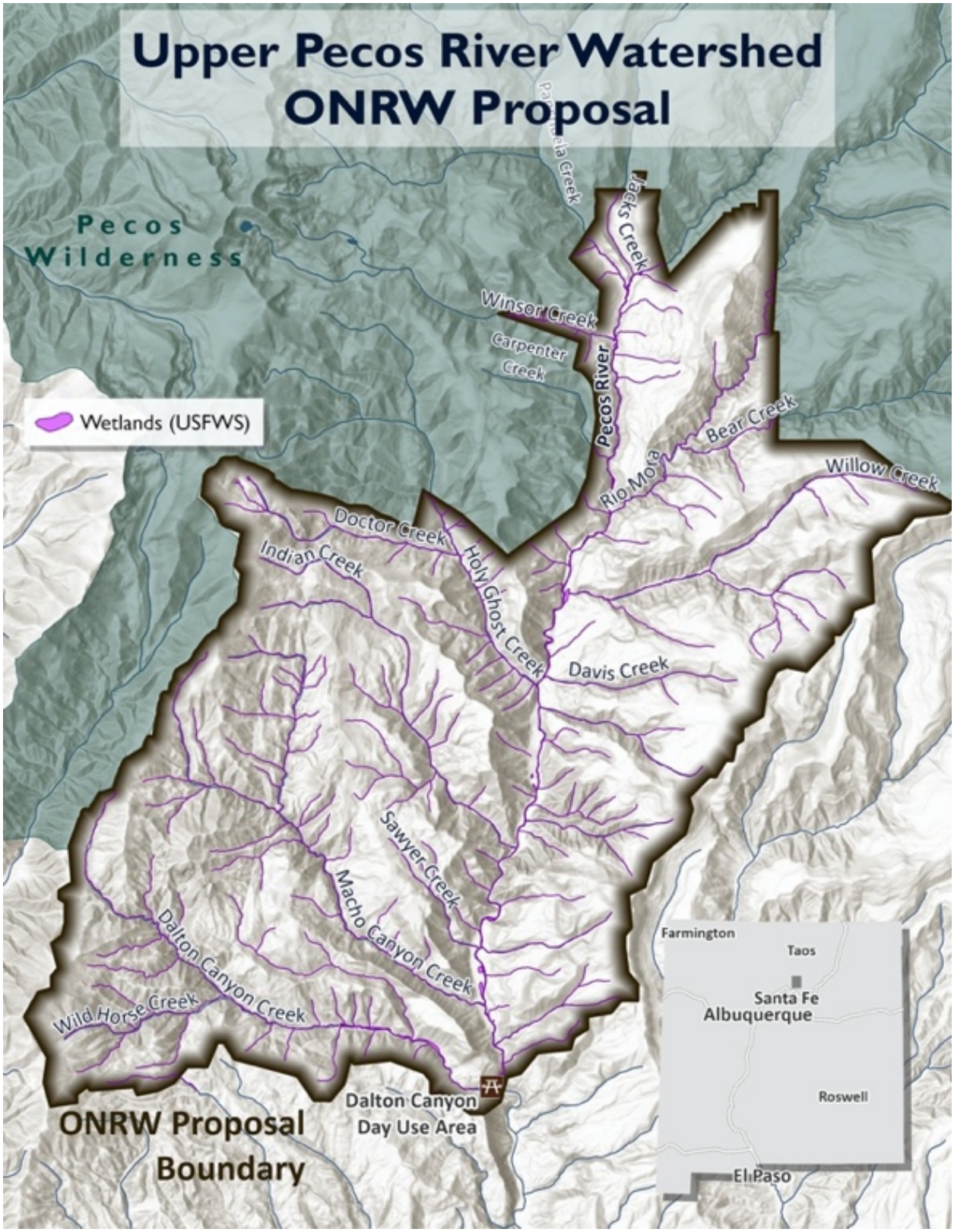
Table 3: Proposed and Protected Miles.

Stream	Proposed Upper Pecos Watershed ONRWs
Bear Creek (from confluence with the Rio Mora to the Wilderness boundary)	1.70
Carpenter Creek (from confluence with the Pecos River to the Wilderness boundary)	0.32
Dalton Canyon Creek (from confluence with the Pecos River to the headwaters)	9.09
Davis Creek (from the confluence with the Pecos River to the headwaters)	2.86
Doctor Creek (from the confluence with Holy Ghost Creek to the headwaters)	3.67
Holy Ghost Creek (from the confluence with the Pecos River to the Wilderness boundary)	3.30
Indian Creek (from the confluence with the Pecos River upstream to the headwaters)	6.62
Jack's Creek (from the confluence with the Pecos River to the Wilderness boundary)	1.36
Macho Canyon Creek (from the confluence with the Pecos River to the headwaters)	8.11
Panchuela Creek (from the confluence with the Pecos River to the Wilderness boundary)	1.07
Pecos River (from the Dalton site upstream to the Wilderness boundary)	14.11
Rio Mora (from the confluence with the Pecos River to the Wilderness boundary)	5.41
Sawyer Creek (from the confluence with the Pecos River to the headwaters)	2.21
Wild Horse Creek (from the confluence with Dalton Canyon Creek to the headwaters)	2.69
Willow Creek (from the confluence with the Pecos River to the headwaters)	5.92
Winsor Creek (from the confluence with the Pecos River to the Wilderness boundary)	1.77
Total	**70.20**

Map 1 of the Nominated Area: Perennial, Intermittent, and Ephemeral Streams.



Map 2 of the Nominated Area: Wetlands.



SECTION 2: SUPPORT FOR THE DESIGNATION

To be designated as an ONRW, the nominated waters must be beneficial to the state and meet at least one of the three criteria in § 20.6.4.9(B) NMAC (2018).

The Upper Pecos Watershed ONRW nomination is justified on the basis of being beneficial to the the state and meeting all three of the criteria for ONRW designation. The nominated waters hold exceptional ecological and recreational significance, and also hold profound community and cultural significance for those who live, work, and recreate in the Upper Pecos Watershed. Subsections 2.1 through 2.4, below, detail how the designation will benefit the state and how the nominated waters meet each of the three criteria set forth in the water quality standards.

2.1 Benefit to the State

Protecting the Upper Pecos Watershed as an ONRW has numerous benefits to the state. The Upper Pecos is the lifeblood of nearby communities and ecosystems. The Pecos provides clean water to multiple acequias for irrigating farms and ranches. It draws visitors from across New Mexico and out of state to enjoy its scenic beauty and abundant outdoor recreation opportunities. Many seek solitude in the rugged forests and canyons of the surrounding Wilderness and National Forest areas. Others gather to picnic or fish at the U.S. Forest Service Dalton Fishing/Day Use area, or camp at one of the nearby campgrounds. Popular recreational activities range from hiking, biking, and camping to fishing, horseback riding, and more. Lodging and other local businesses depend on the health of the Upper Pecos Watershed to attract visitors. Recreation in the Upper Pecos is vital to local economies, and helps diversify the state's economy overall, creating more opportunities for individuals, families, and communities – including future generations – to thrive right here in New Mexico.[18]

These benefits are a product of the Upper Pecos Watershed's exceptional, significant, and intertwined recreational, ecological, economic, and cultural values. These values underscore how and why the Upper Pecos Watershed satisfies multiple ONRW designation criteria, including the presence of special trout waters, exceptional recreational and ecological significance, and the presence of a vast majority of individual segments that are of high quality because they meet or exceed water quality standards and have not been significantly modified by human activities such that they retain their value as a natural resource. Importantly, these benefits are all tied to the existing high quality of the waters within the watershed, which further underscores the value of recognizing and protecting these waters via ONRW designation at the watershed scale.

Despite its exceptional – and indeed, extraordinary – significance, the Upper Pecos Watershed is facing new challenges, both imminent and long-term. Impacts from roads and extractive industries threaten the high quality upstream waters. Degradation of the currently pristine upstream waters would impede efforts to restore and manage the more polluted waters downstream. The ever-increasing effects of climate change exacerbate these threats. Thus, everything we do today to protect the current health of the watershed and boost its long-term

[18] Berrens, et al., Economic and Community Benefits of Protecting New Mexico's Inventoried Roadless Areas at 68 (2006) *available at* www.sustainable-economy.org [hereinafter Berrens et. al. 2006]; U.S. Forest Serv., Landscape Scale Assessment for the Pecos River Headwaters Watershed (2004) [hereinafter USFS 2004].

adaptive capacity and resilience provides a benefit to the communities that rely on the Upper Pecos Watershed, as well as the state as a whole.

The federal Clean Water Act's antidegradation policy — specifically its ONRW provisions — allows for the protection of a state's highest quality, most valued surface waters in perpetuity. New Mexico water quality standards also recognize ONRW protection as a key component of the state's antidegradation policy, and afford maximum water quality protection to ONRWs.[19] The state standards provide that "no degradation shall be allowed" within a designated ONRW,[20] but allow certain pre-existing and traditional land-use activities, such as grazing and acequia operations, to continue.[21]

Some of the myriad benefits to New Mexico associated with designating the Upper Pecos Waterhsed as an ONRW are further detailed below.

2.1.1 Beneficial to the State's Ability to Mitigate and Adapt to Climate Change

Designating New Mexico's qualifying waters, such as the waters of the Upper Pecos Watershed, as ONRWs serves as a keystone of the State's efforts to achieve the objectives not only of the Clean Water Act,[22] but also of the Water Quality Act,[23] and Governor Michelle Lujan Grisham's January 2019 Executive Order ("EO") on climate change.[24] The EO states that it is "imperative for New Mexico to act to protect our citizens and our economy from the damages of climate change impacts," especially in light of federal rollbacks; and mandates that all state agencies "shall evaluate the impacts of climate change on their programs and operations and integrate climate change mitigation and adaptation practices into their programs and operations."[25] The New Mexico Climate Strategy, prepared by the Governor's Interagency Climate Change Task Force, acknowledges this imperative, providing that the New Mexico Environment Department ("NMED") "will identify more Outstanding National Resource Waters ('ONRWs') to further protect special, exceptional, or undamaged waters."[26] Petioners share in this imperative and responsibility to act in service of water quality and the state's public interest priorities.

ONRW designation would amplify current, existing uses in the Upper Pecos Watershed by ensuring the protection and restoration of ecological and recreational significance as well as current water quality into the future. Those whose lives and livelihoods are inexorably linked to the Upper Pecos have long been good stewards. An ONRW designation for the Upper Pecos would help ensure that the watershed continues to flourish in harmony with thriving, resilient ecosystems and communities for generations to come.

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[19] § 20.6.4.8(A)(3) NMAC (2018).

[20] §§ 20.6.4.8(A)(3)(a)-(e) NMAC (2018).

[21] § 20.6.4.8(A)(4) NMAC (2018).

[22] 33 U.S.C. § 1251(a) ("[T]o restore and maintain the chemical, physical, and biological integrity of the Nation's waters.").

[23] §§ 74-6-1 et seq., NMSA 1976.

[24] N.M. Exec. Order No. 2019-003, Executive Order on Addressing Climate Change and Energy Waste Prevention, (Jan. 29, 2019) *available at* https://www.governor.state.nm.us/wp-content/uploads/2019/01/EO_2019-003.pdf.

[25] Id., at Directive 3.

[26] New Mexico Interagency Climate Change Task Force, New Mexico Climate Strategy at 25 (Nov. 2019) *available at* https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf.

2.1.2 Beneficial to the State's Historical and Cultural Significance

The Pecos River holds deep historical and cultural significance, both locally and nationally. Protecting this history and preserving clean water so future generations can carry on these rich traditions has wide reaching benefits to the state.

Pecos Pueblo

P`ǽ kilâ** or Pecos Pueblo, which translates to "the place above the water," is an ancestral pueblo for Pecos descendants at Jemez Pueblo. The **P`ǽ kish, or the Pecos People, and the **Hemish,** or Jemez People, were kin — they were one Towa-speaking people at the time of the great migration from the Four Corners Region. For reasons unknown, the Pecos Clan branched off from the main Jemez group and took a southeastern migration route, eventually making their way down to the Pecos River Valley, which is said to be **Tǫǫk'ô P'ǽǽwâamu** or Corn Cob River Valley. The Pecos People built villages along the Pecos River Valley in the 1200s and 1300s, and by the 1450s they had constructed and settled in the one big village known as Pecos Pueblo. In the spring of 1541, the Spanish Exploration led by Francisco Vazquez de Coronado came upon the great Pueblo of P`ǽ kilâ, home to more than 2,000 people. The Spanish described it as the largest of the Pueblos, well-fortified and having a great number of very healthy people. The Pecos People were adept farmers, planting corn, beans, and squash along the floodplains of the Pecos River and Glorieta Creek, which is said to be **Wǽhǽ P'ǽǽwâamu** or Squash River Valley. They procured big and small game, birds, fish, acorns, berries, seeds and medicinal plants along the far reaches of the headwaters of the Pecos River Valley, down to the toes of the Tecolote Mountains located at the south end of the valley. They established shrines or sacred places along the Sangre de Cristo Mountains, said to be **Gyûhlûbu,** or the Place to take down Game, and along the sacred waters of the Pecos River. The shrines or sacred places were put there to connect with the Holy Beings that lived there.

The encounter with the Spanish was the beginning of the decline for Pecos Pueblo. The once large and powerful Pueblo faced many hardships. Over three generations, the community lost 75 percent of its population. Pecos Pueblo suffered great losses from Spanish and Mexican encroachment, Comanche attacks, and diseases. The most devastating of all was a smallpox epidemic that swept through Pecos Pueblo. Contamination of the Pueblo's source of drinking water caused further sickness. The surviving Pecos People, which numbered less than 40 individuals made the difficult decision to seek refuge at the Pueblo of Jemez. On August 2, 1838, twenty-one **P`ǽ kish** arrived at Jemez Pueblo to humbly request their acceptance amongst their kin.

Jemez Pueblo

Today, the descendants of the Pecos Pueblo reside with the Hemish and are one with the people, pueblo and culture. Jemez Pueblo actively maintains the connection to Pecos Pueblo, and the Upper Pecos Watershed remains culturally significant today. At the beginning of each new year, a tribal consultation meeting involving the Park Superintendent, park staff, Pueblo of Jemez Leadership, Jemez Natural Resources Department, and the Pecos Eagle Society (a traditional religious society group originally from Pecos Pueblo), is held at the Pecos National Historical Park. The Second

Lieutenant Governor for Jemez Pueblo also serves as the Pecos Pueblo Governor, a tribal leadership role created when Pecos and Jemez merged in 1838.

The Pecos Eagle Society returns to its aboriginal homelands at Pecos to perform ceremonial rites at shrines that exist even to this day. Also, on the first Sunday, on or after the second day of August each year, Jemez People go back home to Pecos Pueblo to celebrate the annual feast day for "Our Lady of the Angels of Porciúncula," the patron saint for Pecos Pueblo. A Catholic Mass is celebrated in the morning, followed by traditional dances and feasting. It is a joyous occasion honoring the patroness and commemorating their Pecos Ancestors who reside there. When songs are sung at the Pecos Feast Day dances in Jemez Pueblo on August 2nd of each year, the spirits of the Pecos Ancestors who reside at Pecos Pueblo are called upon to bring blessings to the Jemez people and all peoples who live on Mother Earth.

The Pecos people inhabited the Pecos River Valley, living in many 10 to 50 room structures that were distributed throughout a 40-mile area from Anton Chico, upstream to the area of the current Village of Pecos. By the 16th century, the Pecos peoples had come together to live in one large Pecos Pueblo dwelling with a population of 2,000 to 2,500 people. By the early 19th century, due to Spanish colonization and raids by Apache and Comanche tribes, the Pecos Pueblo population had been reduced to approximately 100 inhabitants. The Upper Pecos Watershed remains culturally significant to the descendants of Pecos Pueblo people.

The Jemez Pueblo supports the designation of the Upper Pecos Watershed as an ONRW and has provided a formal letter of support, see Appendix A.

Spanish Settlers and Land Grants

Starting in the mid 16th century, Spanish settlers arrived in the area and established land grants. The descendants of these settlers still live in the area today. The farming and ranching traditions and other traditional uses of the Upper Pecos Watershed depend on clean water for growing crops and raising livestock. One local organic farmer traces his family origins in the area back eight generations, and a local goat-herder traces his family history in the Upper Pecos back to 1663. Like many other area residents, they depend on this watershed to continue their long-standing traditional land use practices.

Acequias

Flowing into nearby acequias, the waters of the Upper Pecos are vital to local food and agriculture, economies, and communities. Established along with the Spanish and Mexican land grants, the acequias are also a vital part of the land-based culture of the Upper Pecos Watershed and the Pecos River. There are numerous acequias that depend on clean water from the Pecos River for irrigating traditional crops and for maintaining important cultural traditions. Most of the farmers who sell at local farmers' markets derive their water from acequias fed by the Pecos River.

Acequias are known for their cultural connections to the river — not only because they divert water to sustain agricultural traditions — but also in their empirical and cultural knowledge about the river and its respective waterways that are under their care.

Intricate customs and traditions unique to each acequia persist in each of the traditional villages along the Pecos River. These traditions include communal work of keeping the ditches clean and flowing with clean water and the immense challenge of working together to share water in times of scarcity. Their collective approach to water management and their unique role in water governance make acequias a vital cultural asset to the region that is inextricably tied to the waters of the Upper Pecos Watershed.

The New Mexico Acequia Association is a statewide, membership based organization of acequias dedicated to protecting water and revitalizing agricultural traditions. The organization is governed by a federation of acequias, the Congreso de las Acequias, which unanimously supported protection of the Upper Pecos River via ONRW designation by resolution in their most recent statewide conference (see Appendix A).

Molino de la Isla Organics LLC

Petitioner Molino de la Isla Organics LLC is an organic farm created to promote and to protect the acequias of Nuevo Mexico through organic agriculture, regional marketing and consumer education for the socio-economic benefit of the community. Molino de las Isla Organics grows crops that are irrigated by water from the Pecos River. The farm serves as only one example of many that rely on the clean water the Pecos River Watershed provides.

National Context

The Pecos River is an iconic river of the United States and is often referenced in literature, movies, and on television shows. It is a major tributary of the Rio Grande. The phrase "West of the Pecos" or "this side of the Pecos" is a common saying used to divide the country geographically. Today, the rich history and rugged beauty of the Pecos draws visitors from across the U.S, and internationally.

The Village of Pecos

The Village of Pecos is in San Miguel County, New Mexico. The population was 1,392 at the 2010 census, and has been growing much faster than in other parts of San Miguel County, partly because the Village is within commuting distance of the state's capitol at Santa Fe. The Village was built along the Pecos River, which flows from the north out of the Santa Fe National Forest. Notable locations nearby include: Pecos National Historical Park, Glorieta Pass, the Pecos Benedictine Monastery, and Lisboa Springs Trout Hatchery. The Village also serves as an important entry point for hunting, fishing, hiking and camping in the Pecos Wilderness.

A report from the Pecos Sub-Area Plan states that residents in the Pecos area see "forests, mountains, rivers, and streams," "camping, fishing, and hunting," "greenery" and the "Pecos National Historical Park" as major strengths and assets of the Pecos area of San Miguel County.[27] Residents also mentioned the importance of the tourist

[27] Architectural Research Consultants, Inc., San Miguel County, New Mexico: Pecos Subarea Plan (Draft) at II-4 (Sept. 11, 2018) *available at* http://cms6.revize.com/revize/sanmiguelcounty/Pecos%20subarea%20plan.pdf.

economy in the area, and identified campgrounds as an important asset — listing Jack's Creek, in particular — as the "premier campground in Pecos Valley."[28]

Residents' "hopes and dreams" for the Pecos sub-area of San Miguel County include "that Pecos becomes a more prosperous community, stays clean and quiet …," gains a "stronger, growing tourism economy," and places a "focus on resources."[29]

San Miguel County

Residents of San Miguel County have ranked economic diversification and environmental protection among the top three issues of importance "for the future of San Miguel County."[30] Trash cleanup and historic preservation are also high on the list.[31] ONRW designation for the nominated waters would boost efforts related to all of these issues.

San Miguel County residents value the protection of natural resources in their long-term home, both for themselves and for future generations. Seventy-percent of respondents to a survey conducted by the County indicated that they do not anticipate leaving San Miguel County, and an additional ten-percent stated that they anticipate staying at least another 5 to 10 years.[32] "Challenges and opportunities" identified over the next ten years included a need to enforce regulations, or otherwise address dumping of toxic materials and polluting of natural resources in the area.[33]

Preserving the cultural and environmental values and resources of the area for future generations was a priority issue for many residents, as were fracking and contamination of potable water, and river/acequia clean-up.[34] And, the top three industries that residents wanted to see expand in San Miguel County were all related to environmental protection and economic diversification values: renewable energy, tourism, and outdoor recreation.[35]

2.1.3 Beneficial to the State's Economy

As further detailed below under Section 5.1, protecting water quality and healthy fisheries in the Upper Pecos Watershed has substantial economic benefits to the state. Annually, recreation in the Upper Pecos Watershed brings millions of dollars to the State of New Mexico.[36] Due to its

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[28] *Id.* at II-4, II-5.
[29] *Id*. at II-5, II-6.
[30] Architectural Research Consultants, Inc., San Miguel County Comprehensive Plan Update: Report on Community Conversations and Community Survey (Draft) at 1-31 and 1-32 (Dec. 5, 2017) *available at* http://cms6.revize.com/revize/sanmiguelcounty/San%20Miguel%20County%20Comprehensive%20Plan%20Update%2012.7.2017.pdf.
[31] *Id.* at 1-32.
[32] *Id.* at 1-31.
[33] *Id.* at 1-9.
[34] *Id.* at 1-31–1-32.
[35] Architectural Research Consultants, Inc., *supra* n. 36 at 1-33.
[36] N.M. Dep't of Game & Fish, The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis at 14-15, Table 5 (2014) *available at*

proximity to Santa Fe, the Upper Pecos Watershed is a popular tourist destination and many professional guide companies bring clients to the area to fish, hunt, and hike. San Miguel County, home to the Upper Pecos Watershed, is second only to Bernalillo County in terms of millions of dollars generated through fishing activities in the state.[37]

2.2 Exceptional Recreational and Ecological Significance Criteria

All of the individual waters within the nominated Upper Pecos Watershed ONRW hold exceptional recreational and ecological significance.

2.2.1 Recreational Significance

Recreational opportunities in the waters of the Upper Pecos Watershed abound. The watershed draws people from across New Mexico and the United States, providing a significant boost to local and state economies.[38] Annually, there are thousands of visitors to the campgrounds in the nominated area. Multi-generational family gatherings near the river —- whether at campgrounds or day-use areas, such as the Dalton site —- are popular among local users.[39] Recreational activities in the Upper Pecos include camping, hiking, horseback riding, hunting, fishing, bird-watching, photography, backpacking, bike riding, and rafting. Several local outfitters lead seasonal excursions into the wildlands surrounding the Upper Pecos.

The waters of the Upper Pecos are particularly renowned for trout fishing. Many fly fishermen use the area, with the New Mexico Department of Game and Fish ("NMDGF") listing 140,835 angler days per year for the mainstem of the Pecos River from the Village of Pecos upstream to Cowles Campground.[40] Almost the entire nominated stretch of the mainstem of the Pecos River is included in this section. In addition, the NMDGF reports that there are up to 10,000 more angler days per year in eight of the mainstem's nominated, named tributaries.[41] Given that data was only available for eight of the fifteen named tributaries, this number is likely much higher for the watershed as a whole.

The Upper Pecos River Watershed is a large economic driver in terms of fishing activity in the state, as demonstrated by a comparison of the 2013 San Miguel County-wide annual fishing days (118,814) included in the NMDGF Report on the Economics of Fishing, Hunting, and Trapping[42] with the Upper Pecos River-specific numbers provided in Appendix B of this petition. While the Pecos-specific angler data provided by the NMDGF does not include 2013 numbers, in the years for which data is available, the numbers range from 83,000 to 140,000 angler days

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http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf.

[37] *Id at 14-15*

[38] Berrens et. al. 2006; USFS 2004.

[39] U.S. Forest Serv., Final Pecos Wild and Scenic River Management Plan at 7 (July 2003) *available at* https://www.rivers.gov/documents/plans/pecos-plan.pdf.

[40] *See* Appendix B (reporting fishing days, as provided by Eric Frey, N.M. Dep't of Game & Fish (January 21, 2020)).

[41] *Id*.

[42] N.M. Dep't of Game & Fish, The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis at 54 Table A-49 (2014) *available at* http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf.

per year on the mainstem of the Pecos River (the nominated stretch of the Pecos from Dalton Creek upstream to Windsor Creek falls in this study area). This indicates that the majority, and perhaps almost all, of the San Miguel County angler days reported in 2013 are on the Pecos River. Therefore, it is reasonable to conclude that the Upper Pecos Watershed is the most popular fishing destination in the county and has exceptional recreational significance to the region.

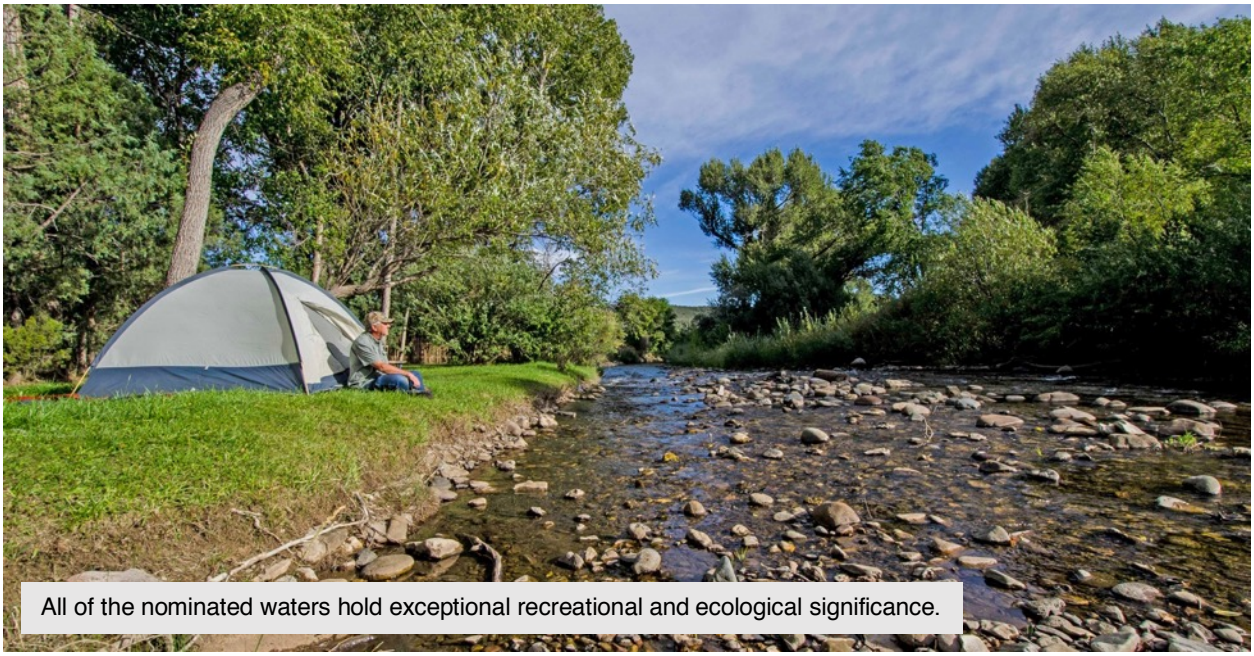
Fly fishing guides have named the Upper Pecos number six (out of eleven) of the top-rated, best places to fly fish in New Mexico.[43] Within the Pecos Canyon, the Pecos River is among New Mexico's best cold-water fisheries.[44] Indeed, one of the designated uses of the Pecos is "high quality, cold-water fisheries."[45] The exceptional recreational significance of the nominated waters is also tied to their economic significance.[46]

Data provided from NMDGF shows that 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 species for each of the nominated stretches of the watershed. The output of this search, a detailed species list, can be found attached in Appendix D, and a table summarizing the number of SERI species found in each nominated drainage for which there was data is included below:

Table 4: Species of Economic and Recreational Importance.

Stream Name	Number of Species of Economic and Recreational Importance (SERI)
Bear Creek	6
Carpenter Creek	7
Dalton Creek	5
Davis Creek	4
Doctor Creek	4
Holy Ghost Creek	4
Indian Creek	4
Macho Creek	5
Panchuela Creek	7
Pecos River	7
Rio Mora	5
Sawyer Creek	4
Wild Horse Creek	4
Willow Creek	5
Winsor Creek	7

[43] Guide Recommended Fishing Tips, *11 Best Places to Fly Fish in New Mexico*, https://guiderecommended.com/fly-fish-new-mexico/ (last visited Apr. 9, 2020).
[44] Upper Pecos Watershed Ass'n, *Pecos River Habitat and Riparian Restoration at Mora Recreation Area (2012 & 2013)* https://pecoswatershed.org/projects/completed-projects/mora-recreation-area/ (last visited Apr. 9, 2020).
[45] U.S. Forest Serv., Final Pecos Wild and Scenic River Management Plan at 10 (July 2003) *available at* https://www.rivers.gov/documents/plans/pecos-plan.pdf.
[46] *See infra,* Section 5.1.



All of the nominated waters hold exceptional recreational and ecological significance.

2.2.2 Ecological Significance

The nominated waters are also of exceptional ecological significance. For one, the waters of the Upper Pecos support a diverse array of wildlife species, including Rocky Mountain bighorn sheep, elk, mule deer, mountain lions, bobcats, and golden eagles. The following federally endangered or threatened species, state endangered or threatened, and special status species inhabit the nominated area:

Wildlife and Fish

- Mexican Spotted Owl (Threatened: Federally listed, Critical Habitat designated)
- Rio Grande Cutthroat Trout (Candidate species for listing)
- Boreal Owl (State Threatened)
- Spotted Bat (State Threatened)
- Spotted Owl (State Threatened)
- Bald Eagle (State Threatened)
- Peregrine Falcon (State Threatened)

Plants

- Holy Ghost Ipomopsis: Endangered Endangered: (Federally listed, Special Status Plant Species, State Endangered)
- New Mexico Stickweed (Special Status Plant Species)
- Sapello Canyon Larkspur (Special Status Plant Species)
- Mountain Lily (Special Status Plant Species, State Endangered)
- Yellow Lady's Slipper (Special Status Plant Species, State Endangered)
- Hooded Ladies' Tresses (Special Status Plant Species)

The Pecos River is also a productive fishing stream and is home to one of few remaining populations of New Mexico's native cutthroat trout. There are only a limited

number of locations in New Mexico drainages that support populations of this species. Within the nominated stretches of waters, these include:[47]

- Jack's Creek (from Highway 63 to the Pecos Wilderness boundary)
- Macho Creek, including the North Fork of Macho Creek, and Tributary #1
- Dalton Creek
- Wild Horse Creek
- Indian Creek
- Doctor Creek

The NMDGF also plans to restore Rio Grande cutthroat trout ("RGCT") populations to Cow Creek and Willow Creek.

In this context, ONRW designation can serve as a protective "backstop" to the RGCT's further population depletion that can assist in the species' conservation and recovery and thereby decrease the likelihood that federal Endangered Species Act ("ESA") listing might become necessary. This potential to avoid the federal listing of one of New Mexico's native trout species – and its State fish – makes ONRW designation of these waters of especially great ecological significance to the State.

The nominated portion of the Upper Pecos Watershed also supports many species identified by the NMDGF as Species of Greatest Conservation Need ("SGCN"). To be considered a SGCN, a species must meet at least one of the following conditions:

- **Declining:** Species that have experienced substantial long-term declines in habitat or numbers.

- **Vulnerable:** Species in which some aspect of their life history and ecology makes them disproportionately susceptible to decline within the next 10 years. Factors include, but are not limited to: concentration to small areas during migration or hibernation; low reproductive rates; susceptibility to disease, inability to respond to changing climate conditions, habitat loss, wildfire, and overexploitation for anthropogenic purposes.

- **Endemic:** Species that are limited to New Mexico.

- **Disjunct**: Species that have populations geographically isolated from other populations of the same species and are thereby disproportionately susceptible to local decline or extirpation.

- **Keystone:** Species that are crucial to the integrity and the functioning of their ecosystems. These species may represent more value to conservation of biological diversity than the size of their population or their distribution would suggest.

[47] Personal communication (email) with Eric Frey, NMDGF Fisheries biologist, July 23rd, 2020.

The NMDGF, in a targeted search of species found within the nominated area, identified many SGCN in the nominated drainages.[48] The following table summarizes the number of SGCN in each drainage for which there was data:

Table 5: Species of Greatest Conservation Need.

Stream Name	Number of Species of Greatest Conservation Need (SGCN) Found in drainage
Bear Creek	14
Carpenter Creek	16
Dalton Creek	20
Davis Creek	21
Doctor Creek	22
Holy Ghost Creek	21
Indian Creek	23
Macho Creek	22
Panchuela Creek	16
Pecos River	23
Rio Mora	16
Sawyer Creek	18
Wild Horse Creek	20
Willow Creek	19
Winsor Creek	15

Many of these drainages have either federal- or state-listed threatened species, as detailed in the table below.

[48] Spreadsheets and maps of species provided by the New Mexico Department of Game and Fish is included in Appendix D

Table 6: Federal and State Threatened or Endangered Wildlife Species by Drainage

Stream Name	Species that are Threatened or Endangered under the Endangered Species Act	Species that are Threatened or Endangered under the State Wildlife Conservation Act
Bear Creek		1 Threatened (Peregrine Falcon)
Carpenter Creek		1 Threatened (Peregrine Falcon)
Dalton Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Davis Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Doctor Creek		3 Threatened (Peregrine Falcon, Spotted Bat, Boreal Owl)
Holy Ghost Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Indian Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Macho Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	3 Threatened (Peregrine Falcon, Spotted Bat, Boreal Owl)
Panchuela Creek		1 Threatened (Peregrine Falcon)
Pecos River	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Rio Mora		1 Threatened (Peregrine Falcon)
Sawyer Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Wild Horse Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	3 Threatened (Peregrine Falcon, Spotted Bat, Bald Eagle)
Willow Creek	1 Threatened (Mexican Spotted Owl Designated Critical Habitat)	1 Threatened (Peregrine Falcon)
Winsor Creek		1 Threatened (Peregrine Falcon)

The nominated area supports one federally-endangered, and several state-endangered and special status plant species. Special Status Plant Species is a term used in the scientific community for plant species that are considered sufficiently rare that they require special consideration and/or protection and should be, or have been, listed as rare, threatened, or endangered, by either federal or state agencies. The Forestry Division of the New Mexico Energy Minerals and Natural Resources Division maintains a comprehensive list of endangered plant species,[49] several of which occur in the nominated area, as illustrated in the tables below. The NMDGF has provided a list of Special Status Plant Species by Drainage:[50]

[49] The list of state endangered plant species can be found in Appendix E.
[50] The New Mexico Department of Game and Fish provided a comprehensive special species lists by drainage. These lists can be found in Appendix D.

Tables 7–17: Endangered and Special Status Plant Species By Drainage.

TABLE 7: CARPENTER CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**State Endangered**
New Mexico Stickseed	Hackelia hirsuta	X	
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Sapello Canyon Larkspur	Delphinium sapellonis	X	
Mountain Lily	Lilium philadelphicum var. andinum	X	X
Hooded Ladies'-Tresses	Spiranthes romanzoffiana	X	

TABLE 8: DAVIS CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X

TABLE 9: DOCTOR CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Hooded Ladies'-Tresses	Spiranthes romanzoffiana	X	

TABLE 10: HOLY GHOST CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Mountain Lily	Lilium philadelphicum var. andinum	X	X

TABLE 11: INDIAN CREEK SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X

TABLE 12: MACHO CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens	X	X
Mountain Lily	Lilium philadelphicum var. andinum	X	X

TABLE 13: PANCHUELA CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
New Mexico Stickseed	Hackelia hirsuta	X	
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Sapello Canyon Larkspur	Delphinium sapellonis	X	
Mountain Lily	Lilium philadelphicum var. andinum	X	X
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens	X	X

TABLE 14: PECOS RIVER ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
New Mexico Stickseed	Hackelia hirsuta	X	
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Sapello Canyon Larkspur	Delphinium sapellonis	X	
Mountain Lily	Lilium philadelphicum var. andinum	X	X
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens	X	X

TABLE 15: RIO MORA ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
New Mexico Stickseed	Hackelia hirsuta	X	
Sapello Canyon Larkspur	Delphinium sapellonis	X	
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens	X	X

TABLE 16: WILLOW CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X

TABLE 17: WINSOR CREEK ENDANGERED AND SPECIAL STATUS PLANT SPECIES			
Common Name	**Scientific Name**	**Special Status Species**	**Listed as State Endangered**
New Mexico Stickseed	Hackelia hirsuta	X	
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus	X	X
Sapello Canyon Larkspur	Delphinium sapellonis	X	
Mountain Lily	Lilium philadelphicum var. andinum	X	X
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens	X	X
Hooded Ladies'-Tresses	Spiranthes romanzoffiana	X	

The Holy Ghost ipomoposis (*Ipomopsis sancti-spiritus*) was listed as federally endangered under the ESA in 1994 by the U.S. Fish and Wildlife Service. At that time, its distribution was limited to a two-mile section of Holy Ghost Canyon, and it was extremely susceptible to extinction as a result. To combat this threat, recovery efforts focused on expanding the plant's distribution to adjoining drainages. NMDGF currently lists the Holy Ghost Ipomoposis 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, and Indian Creek. Additionally, the species now lives in new sites along Holy Ghost Creek. Efforts to recover the species have demonstrated positive results and have enjoyed significant community support. ONRW designation would similarly aid the Holy Ghost ipomopsis by providing a safeguard against any inappropriate disturbance to the species' habitat that could undermine recovery efforts and lead to its extinction.

ONRW designation in the nominated portion of the Upper Pecos Watershed would help ensure that healthy populations of the area's flora and fauna continue to thrive, and provide vital added protections for endangered or threatened species and their habitat, demonstrating that the watershed is ecologically significant.

The nominated waters are also of exceptional ecological significance.

2.3 Significant Attributes Criteria

The nominated waters satisfy the "significant attributes" designation criterion in § 20.6.4.9(B)(1) in at least three ways: (1) the nomination includes waters that are a significant attribute of a Wild and Scenic River (the Pecos River); (2) the nomination includes waters that are a significant attribute of state Special Trout Waters; and (3) while the nominated waters do not fall within a designated wilderness area, they are a significant attribute of a designated wilderness area due to their interconnectedness with upstream waters within the Pecos Wilderness.

2.3.1 Significant Attribute of a Wild and Scenic River

Over 20 miles of the Pecos River (specifically, 20.5 miles) — from Davis Creek near the town of Tererro, upstream to the headwaters — are designated Wild and Scenic (specifically, "Wild" or "Recreational") pursuant to the Wild and Scenic Rivers Act, 16 U.S.C. § 1271, et seq. ("WSRA").[51] The 13.5-mile Wild portion is entirely within the Pecos Wilderness, and these waters were designated as Wilderness ONRWs in 2010. The Recreational segment downstream, just outside of the Wilderness boundaries, spans 7-miles of the mainstem of the Pecos River. This 7-mile Recreational Wild and Scenic stretch is in the currently nominated segment of the Upper Pecos River — and encompasses just under half of the total 14.11-mile length of the nominated stretch of the Pecos mainstem.

The Wild and Scenic stretch of the Pecos River is thus a significant fraction of the nominated stretch of the mainstem. This significance goes both ways — the nominated stretch of the mainstem of the Pecos is *also* a significant fraction of the Wild and Scenic designated segment overall (and especially of the Recreational segment). The nominated waters comprise nearly one-third of the entire Wild and Scenic stretch of the Pecos, and almost *all* of the section designated as Recreational. To be classified as "Wild," "Scenic," or "Recreational" under the WSRA, these stretches of the Pecos River must "possess *outstandingly remarkable* scenic,

[51] 16 U.S.C. § 1274(a)(110); *see also* USFS 2004, *supra* n. 18.

recreational, geologic, fish and wildlife, historic, cultural, or other similar values."[52] This requirement of "*outstandingly remarkable"* values ("ORVs") resembles and reinforces the ONRW designation criterion of "*exceptional* recreational or ecological significance,"[53] as discussed above. The U.S. Forest Service included this stretch of the Pecos River in the Wild and Scenic River system based on its scenic, recreational, and cultural/historic values.[54] These same values support ONRW designation of the nominated waters for their exceptional recreational and ecological significance[55] and their community and cultural significance.[56]

While the two designations share similar, mutually reinforcing criteria, ONRW designation would complement and strengthen — rather than duplicate — water quality protections for the Wild and Scenic designated portion of the Pecos River; particularly in the Recreational segment that encompasses six-miles of nominated waters. While the Wild segment is accessible only by trail, the Recreational section contains cabins and other modifications along the shoreline, and a paved road that parallels the river. This more heavily used area would benefit from water quality-based protections to help ensure that it retains its "outstandingly remarkable" recreational values and "exceptional" recreational and ecological significance long term.

Moreover — and critically — the Wild and Scenic Rivers Act does not provide any water quality-based protections, such as designated uses, water quality criteria, or antidegradation requirements. But, surface waters designated as ONRWs are afforded the highest level of water quality-based protection under the New Mexico Water Quality Act's Antidegradation Policy and Implementation Plan in § 20.6.4.8 NMAC (2018), and as Tier III waters in the NMED's Water Quality Management Plan-Continuing Planning Policy. These water quality-based protections safeguard the Upper Pecos against new or increased pollution and degradation and also boost adaptive capacity and watershed resilience in the face of ever-increasing threats from climate change.

[52] USFS 2004, *supra* n. 18. at 1 (quoting PL 90-542 (1968)) (emphasis added).
[53] § 20.6.4.9 NMAC (2018) (emphasis added).
[54] USFS 2004., *supra* n. 18.
[55] *See supra,* Section 2.1.
[56] *See infra,* Section 2.4.

The nominated waters satisfy the "significant attributes" designation criterion.

2.3.2 Significant Attribute of a Special Trout Water

Fishing on the Pecos River is of such high quality and popularity that a stretch of the nominated area includes state Special Trout Waters. Special Trout Water designations aim to enhance New Mexico's unique angling opportunities and promote native trout conservation — some are managed to produce trophy-size trout, some to improve conservation of native trout, and others to enhance the overall trout population structure and density.[57] Regulations are tailored to each water, and can include reduced bag limits, catch-and-release for native Gila trout and Rio Grande cutthroat trout, or increased harvest for nonnative fish species.[58]

The entire nominated area falls within a general "trout water area" according to the NMDGF in its 2019–2020 Fishing Rules and Information[59] and accompanying map.[60] Within that "trout water area," the nominated area also includes the following state Special Trout Waters:

- Jack's Creek from the waterfalls located 0.25 miles downstream of NM Hwy. 63 crossing upstream to its headwaters; and
- "Pecos Box" (from the Rio Mora confluence to Cowles)

An ONRW designation will complement management of these state Special Trout Waters, and of nearby Special Trout Waters with existing ONRW designations in the Pecos Wilderness. ONRW designation will also benefit downstream restoration efforts.

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[57] N.M. Dep't of Game & Fish, 2019-2020 Fishing Rules & Info at 19–21, *available at* http://www.wildlife.state.nm.us/download/publications/rib/2019/fishing/2019_20-New-Mexico-Fishing-Rules-and-Info.pdf.
[58] *Id*.
[59] *Id*.
[60] N.M. Dep't of Game & Fish, 2019 Fishing Waters Map (Special Trout Waters) *available at* http://www.wildlife.state.nm.us/download/fishing/maps/Fishing-Waters-Map-RIB-2019-New-Mexico-DGF.pdf.

A stretch of the nominated area includes state Special Trout Waters.

2.3.3 Significant Attribute of a Designated Wilderness Area

While none of the nominated area is within a designated wilderness (pursuant to the Wilderness Act of 1964, 16 U.S.C. 1131, *et seq.*), it is immediately adjacent to the Pecos Wilderness and is a vital component of that broader landscape.[61] The mainstem of the Pecos River is the nearest water body to the upstream wilderness boundaries of the nominated area. However, the headwaters of many of its tributaries *are* within the Pecos Wilderness.

Fish and wildlife that travel across these wilderness boundaries from the tributaries and headwaters to the mainstem of the Pecos River within the nominated area do not distinguish wilderness areas from non-wilderness areas. Their dependence on high-quality downstream waters in the nominated area is deeply entwined with their dependence on high-quality waters upstream in the Pecos Wilderness. Such ecological and hydrological interconnectedness makes the nominated waters a significant attribute of the neighboring Pecos Wilderness area.

2.4 Water Quality Equal to or Better Than Specified New Mexico WQS Criteria

The entire nominated segment of the mainstem of the Pecos River meets all tested water quality parameters. Most of the fifteen named tributaries in the nominated segment also meet water quality standards. Three of the 15 named tributaries — Macho Canyon Creek, Dalton Canyon, and Willow Creek — exceed water quality standards for one water quality parameter: specific conductance.[62]All three are in category 4A for overall attainment of water quality

[61] The nominated waters do not include waters within the Pecos Wilderness because those eligible waters were designated as Wilderness ONRWs in 2010. *See* § 20.6.4.9(D)(3)(b).

[62] *See* N.M. Env't Dep't, Clean Water Act 303(d)/305(b) Integrated Report, Appendix A at 266, 276, 291, *available at* https://www.env.nm.gov/wp-content/uploads/sites/25/2018/03/Appendix-A-Integrated-List.pdf (including Dalton Canyon (p. 266), Macho Canyon Creek (p. 276), and Willow Creek (p. 291)).

standards in the State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report. This means they are impaired for one or more designated uses, but a Total Maximum Daily Load ("TMDL") has already been completed for these waters. The Clean Water Act requires TMDLs to be developed for all waters identified on the 303(d) impaired waters list, in order to determine a pollution reduction target for those waters and allocate load reductions necessary to the pollutant source or sources. A TMDL is a calculation of the carrying capacity of a waterbody with respect to a particular pollutant. During the development of the TMDL, the maximum allowable amount of a pollutant from all sources is derived. This amount is calculated to ensure that all designated uses affected by that particular pollutant, such as swimming or cold water fish, will be fully met. To be listed in the 4A category, all TMDLs must have been developed and approved by the U.S. Environmental Protection Agency such that, when implemented, they are expected to result in full attainment of the applicable water quality standard.[63] In addition Willow Creek has been listed by NMED as a National Pollutant Discharge Elimination Systen success story.[64] A summary of existing water quality is summarized below in Table 18.

Table 18: Exisiting Water Quality in Nominated Waters.[65]

Waterbody/Reach	Uses	Criteria	Use Support	Impairment	Water Quality is Equal to or Better than Criteria
Bear Creek	Warmwater aquatic life, livestock watering, wildlife habitat and primary contact				Not Assessed
	Warm Water Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen 5 mg/L or more, maximum temperature 32.2°C (90°F) and pH within the range of 6.6 to 9.0	Not Assessed		
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less	Not Assessed		
Carpenter Creek	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Not Assessed
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of	Not Assessed		

[63] *Id.* at iii.
[64] *See* N.M. Env't Dep't, Clean Water Act 303(d)/305(b) Integrated Report, at pp.43-44, *available at* https://www.env.nm.gov/surface-water-quality/303d-305b/
[65] *Id.* at Appendix A

		6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm and use specific criteria found at 20.6.4.900.I and J			
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Not Assessed		
Dalton Canyon Creek (perennial stretch, Pecos River to the headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				No
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Not supporting	Specific Conductance, 2012 (TMDL approved by U.S. Environmental Protection Agency (EPA) on 9/25/2013)	
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully supporting		
Davis Creek	Livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact		Not assessed		Not Assessed
	Marginal Warmwater Aquatic Life	§ 20.6.4.900 NMAC			
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less			
Doctor Creek (Holy Ghost Creek to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		

Holy Ghost (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Indian Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Jack's Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		

Macho Canyon Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				No
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Not Supporting	Specific Conductance, 2012 (TMDL EPA on 9/25/2013)	
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Panchuela Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Pecos River (Alamitos Canyon to Jack's Creek)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		

Pecos River (Jack's Creek to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Rio Mora	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Rito del Oso (Rio Mora to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		

Sawyer Creek	Livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact		Not Assessed		Not Assessed
	Marginal Warmwater Aquatic Life	§ 20.6.4.900 NMAC			
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less			
Wild Horse Creek	Livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact		Not Assessed		Not Assessed
	Marginal Warmwater Aquatic Life	§ 20.6.4.900 NMAC			
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less			
Willow Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				No
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Not Supporting	Specific Conductance, 2004 (TMDL EPA on 9/25/2013)	
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100 mL or less, single sample 235 cfu/100 mL or less	Fully Supporting		
Winsor Creek (Pecos River to headwaters)	Domestic water supply, fish culture, high quality coldwater aquatic life, irrigation, livestock watering, wildlife habitat, primary contact, and public water supply on the main stem of the Pecos River				Yes
	High Quality Coldwater Aquatic Life	§ 20.6.4.900 NMAC; dissolved oxygen >=6.0 mg/L, 4T3 temp 20°C (68°F), max temperature 23°C (73°F), pH range of 6.6-8., and specific conductance <= 300 µS/cm and 1,500 µS/cm	Fully Supporting		
	Primary Contact	The monthly geometric mean of E. coli 126 cfu/100	Fully Supporting		

		mL or less, single sample 235 cfu/100 mL or less			
Ephemeral Waters	Livestock watering, wildlife habitat, limited aquatic life and secondary contact				Not Assessed
	Limited Aquatic Life	§ 20.6.4.900 NMAC			
	Secondary Contact	The monthly geometric mean of E. coli bacteria of 548 cfu/100 mL or MPN/100 mL and single sample of 2507 cfu/100 mL or MPN/100 mL apply to this use.			
Intermittent Waters	Livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact				Not Assessed
	Marginal Warmwater Aquatic Life	§ 20.6.4.900 NMAC			
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less			
Perennial Waters, Not Classified	Warmwater aquatic life, livestock watering, wildlife habitat and primary contact				Not Assessed
	Warmwater Aquatic Life	§ 20.6.4.900 NMAC			
	Primary Contact	The monthly geometric mean of E. coli bacteria 206 cfu/100 mL or less, single sample 940 cfu/100 mL or less			

As demonstrated in the table, many of the nominated waters are meeting or exceeding water quality criteria associated with the aquatic life and contact uses — the two uses listed as part of the ONRW nominating criteria at § 20.6.4.9.B(3) NMAC (2018). Three nominated tributaries are not meeting water quality standards for just one parameter: specific conductance. In addition, as shown in the table, a number of the named tributaries in the nominated area have not been assessed. It is important to note that the waters that have been assessed in the nominated watershed area, have more protective water quality standards (most have high quality cold water aquatic life use and stringent, segment-specific E.coli criteria) than the waters that weren't assessed (most have marginal warmwater aquatic life use and less-stringent E.coli criteria). It is logical to extrapolate from this and hypothesize that the unassessed waters are also meeting the applicable water quality standards, especially since those standards are less protective than the standards associated with the waters that were assessed and which are, for the most part, being met. Water quality is discussed further in Section 3 of this nomination. In addition, the ONRW existing water quality nominating criteria requires that "the water not be significantly modified by human activities in a manner that substantially detracts from its value as a natural resource." § 20.6.4.9.B(3) NMAC (2018). While there is a road that follows the river along the mainstem of the Pecos River in the nominated area, this does not substantially detract from its ONRW value, or its value as a natural resource. As detailed above in the recreational signficance section (Section 2.2.1), the nominated area is a major fishing destination, and this high recreational use is facilitated by the easy access that the roads that run near the mainstem

and several of the tributaries provide. The one canyon that may not meet this criteria is Willow Creek, as it has been substantially impacted by past mining activity.

In summary, the existing water quality is equal to or better than the numeric water quality criteria for all of the mainstem of the Pecos River in the nominated stretch of waters, and almost all of the named tributaries. Three of the fifteen named tributaries — Macho Canyon Creek, Dalton Canyon, and Willow Creek — exceed water quality standards for one water quality parameter (specific conductance).[66] In addition, the nominated waters are of exceptional recreational and ecological significance and are significant attributes of Special Trout Waters, a Wild and Scenic River, and of the Pecos Wilderness. All of these characteristics indicate that human activity has not significantly modified the nominated waters, with the exception of Willow Creek, in a manner that substantially detracts from their value as a natural resource. Thus, the nominated waters satisfy § 20.6.4.9(B)(3) NMAC (2018).

The Pecos River holds deep historical and cultural significance.

SECTION 3: BASELINE WATER QUALITY DATA AND COMPARISON TO NUMERIC CRITERIA

The NMED is responsible for water quality in the state, with authority and responsibility delegated to the Surface Water Quality Bureau ("SWQB") to monitor and protect surface water

[66] N.M. Env't Dep't, *supra* n. 31.

quality. The SWQB monitored water quality in the Pecos River Headwaters as part of the Upper Pecos River Watershed Survey between March and November of 2001, and again between April and December of 2010. Available water quality data are summarized below, and included in Appendix C, to establish a baseline water quality condition and to satisfy the nominating criteria identified at § 20.6.4.9(B)(3) NMAC (2018). Water quality monitoring included measurements of a variety of chemical, physical, and biological parameters, such as:

- Basic field measurements: including dissolved oxygen ("DO"), temperature, pH, turbidity, salinity, and conductivity;
- Nutrients: including ammonia, nitrate+ nitrite, total kjehldal nitrogen, total organic carbon, and total phosphorus;
- Ions: including hardness, total dissolved solids ("TDS"), and total suspended solids ("TSS");
- Total coliform and E. Coli;
- Dissolved metals: including aluminum, zinc, and lead;
- Total metals: including mercury and selenium;
- Habitat data: including channel dimensions and substrate characterizations; and
- Benthic macroinvertebrate populations and fish ecology.

As detailed in Section 2.4 above, the mainstem of the Pecos River and most of the fifteen named tributaries in the nominated segment meet water quality standards. Three of the 15 named tributaries — Macho Canyon Creek, Dalton Canyon, and Willow Creek — exceed water quality standards for one water quality parameter: specific conductance.[67]

All available water quality data for the nominated waters is presented in Appendix C.

SECTION 4: ACTIVITIES THAT MIGHT CONTRIBUTE TO THE REDUCTION OF WATER QUALITY

A variety of ongoing and potential, future activities might contribute to a reduction of water quality in the nominated waters.

4.1 Potential Hard Rock Mining

More than 40% of stream reaches in western watersheds are contaminated by acid mine drainage and associated heavy metals. Acid mine drainage from mining activities have caused massive fish kills and the poisoning of migratory birds at many sites across the West. Hard rock mining has historically occurred in the Upper Pecos Watershed, and may occur in the future.

4.2 Development and Transportation

Increased sediment loading from roads and development can cause substantial water quality problems. The relationship between road building in formerly undisturbed areas and increased sediment yield in streams is well established.[68] A nine-year study by the Forest Service in

[67] *See* N.M. Env't Dep't, Clean Water Act 303(d)/305(b) Integrated Report, Appendix A at 266, 276, 291, *available at* https://www.env.nm.gov/wp-content/uploads/sites/25/2018/03/Appendix-A-Integrated-List.pdf (including Dalton Canyon (p. 266), Macho Canyon Creek (p. 276), and Willow Creek (p. 291)).
[68] Loomis, J. B., Economic Benefits of Pristine Watersheds, American Wilderness

California found that stream sediment increased 80% with road building in a previously pristine watershed.[69] When more area in a watershed is covered by impervious surfaces, runoff quantity and velocity increases, which results in increased erosion and loading of sediment and other contaminants such as metals, PCBs, etc. that are attached to sediment. Any increase in river sediment affects inflow of oxygen, increases water temperature, and negatively impacts food availability. Not only do these factors decrease fish populations and increase fish stress but also, such conditions degrade the fishing experience. Boaters have expressed similar concerns over water clarity and its negative effect on recreation.[70] In addition, increased sediment loading in a stream can contribute to increased conductivity. A rapid or larger-than-normal increase in conductivity, in turn, can adversely affect aquatic organisms if they don't have the time or capacity to adapt.

4.3 Increased Recreational Use Without Proper Management

Recreation is an essential part of what makes the Pecos a Wild and Scenic River and a deserving candidate for ONRW designation. But, in order to ensure this exceptional recreational significance for future generations, recreation in the Upper Pecos Watershed must be properly managed and accompanied by robust water quality protections. Poorly managed recreational use of a watershed can lead to increased erosion and other water quality issues, such as E. coli loading.

4.4 Waste Disposal

Illegal dumping of trash and construction waste is a threat to water quality across much of New Mexico, including the nominated waters.

4.5 Wildfires

A devastating wildfire burned through Pecos Canyon in 2013, spanning over 10,000 acres and forcing evacuations in the area. Whether caused by lightning, downed power lines, or other sources, wildfires can lead to soil erosion when they burn through forests. Soil erosion, in turn, can reduce water quality. Climate change exacerbates the threat of wildfires, and is expected to continue to do so throughout the Southwest, in particular.[71]

4.6 Climate Change

As our climate warms, our rivers and streams also warm. High stream temperature is the most common water impairment in the State of New Mexico, and it is especially dangerous to aquatic life. Hotter water does not hold as much oxygen, thus reducing the amount of dissolved oxygen available for fish. In addition, hotter climates can result in lower flows, which can result in a concentration of pollutants in rivers and streams. Climate change also affects the global

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Alliance (1988) [hereinafter Loomis 1988].

[69] *Id.* (citing Pearce (1987)).

[70] *Id*.

[71] U.S. Global Change Research Program, Impacts, Risks, and Adaptation in the U.S.; Fourth National Climate Assessment, Vol. II at Ch. 25: Southwest, Key Message 2: Ecosystems (2018) *available at* https://nca2018.globalchange.gov/chapter/25/.

hydrologic cycle, and thus the quality, quantity, and timing of streamflows.[72] Erosion is expected to increase as a result of higher peak flows and reductions in ground cover from reduced snowpacks, as well as increased intensity and frequency of wildfires.[73] Sediment loads are thus expected to increase, affecting municipal water supplies and aquatic habitats.[74] Healthy watersheds, by contrast, can perform "ecosystem services" that boost resilience and adaptive capacity in the face of climate change. ONRW designation can thus help protect not only the waters of the Upper Pecos, but also all of the surrounding ecosystems and communities that rely on these high-quality waters and their ecosystem services, today and for future generations.

SECTION 5: ADDITIONAL INFORMATION SUPPORTING ONRW DESIGNATION

5.1 Economic Significance

One of the distinctive benefits of ONRW designation is the protective value it affords to native plant and animal life, as well as downstream water users, including municipalities. Much of the water in New Mexico flows from relatively intact forests and congressionally designated wilderness areas. The WQCC has recognized the high quality of these waters, stating in its 2000 report to Congress that the majority of waters determined to fully support designated uses "are in wilderness areas or in watersheds protected from anthropogenic impacts."[75] Several small communities and larger municipalities rely on this water from the Upper Pecos Watershed, including Santa Fe, Las Vegas, and the Village of Pecos. Allowing degradation in the area, whether from hard-rock mining, recreational over-use, or otherwise, could adversely affect the drinking water for tens of thousands of inhabitants who live downstream and rely on water from the Upper Pecos Watershed for their daily needs. Watersheds — such as the Upper Pecos — purify the waters that flow from them at no cost to downstream municipalities. Such a valuable ecological service provides potentially significant nonmarket economic benefits and can save vast sums of money and bolster the adaptive capacity and resilience of area municipalities both ecologically *and* financially in the face of climate change.

The economic significance of the nominated waters is also tied to their exceptional recreational significance. Recreation is essential to local economies. For example, there are six lodging businesses and one store along the Pecos River (from Windy Bridge to Cowles) that depend on the recreating public. The Pecos Business Association ("PBA"), a New Mexico non-profit business league, also relies on healthy waters to attract visitors. Annually, recreation brings millions of dollars to the area surrounding the nominated waters (and to the state of New Mexico). In 2013, anglers alone spent $28,912,139.00 towards fishing with destinations in San Miguel County, second only to Bernalillo County.[76] Hunters spent $18,379,145.00. That same

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[72] U.S. Forest Serv., Water, Climate Change, and Forests: Watershed Stewardship for a Changing Climate at 12 (2010) *available at* https://www.fs.fed.us/pnw/pubs/pnw_gtr812.pdf.
[73] *Id.* at 21
[74] *Id*.
[75] N.M. Dep't of Game & Fish, Habitat Fragmentation and the Effects of Roads on Wildlife and Habitats at 8 (Jan. 2005) *available at* http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Effects-of-Roads-on-Wildlife-and-Habitats.pdf (citing N.M. Water Quality Control Comm'n, Water Quality and Water Pollution Control in New Mexico: A Report Prepared for Submission to the Congress of the United States by the State of New Mexico Pursuant to Section 305(b) of the Federal Clean Water Act (2000)).
[76] N.M. Dep't of Game & Fish, The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis at 14-15, Table 5 (2014) *available at*

year, anglers with fishing destinations in San Miguel County contributed substantially to the state economy by providing 333 jobs, $11,714,212.00 in labor income, $20,520,632.00 to the state GDP, and $2,305,642.00 in state and local tax revenue.[77] Hunters destined for San Miguel County contributed 232 jobs, $7,728,633.00 in labor income, $12,470,274 towards the state GDP, and $1,309,733.00 in state and local tax revenue in 2013[78].

In San Miguel County in 2013, anglers enjoyed 118,814 fishing days. It is important to compare these 2013 San Miguel County-wide numbers with the Upper Pecos River- specific numbers provided in Appendix B. While the Pecos-specific angler data provided by the NMDGF does not include 2013 numbers, in the years for which data is available, the numbers range from 83,000 to 140,000 angler days per year, indicating that the majority — if not almost all — of the San Miguel County angler days reported in 2013 are on the Pecos River.

Recreation along the Upper Pecos also helps boost and diversify New Mexico's economy overall. Indeed, Governor Michelle Lujan Grisham and the New Mexico legislature have recognized the importance of outdoor recreation to economic development in New Mexico. In 2019, the legislature passed — and the Governor signed — Senate Bill 462, creating an Outdoor Recreation Division within the Economic Development Department, and an accompanying Outdoor Recreation Infrastructure Fund. ONRW designation to protect these recreationally significant waters of the Upper Pecos Watershed would complement this legislation.

The U.S. Forest Service has also recognized the exceptional recreational significance of the Upper Pecos Watershed. Recreation is an Outstandingly Remarkable Value ("ORV") for which seven-miles of the Upper Pecos River have been designated under the WSRA.[79] The nominated waters span six-miles of this seven-mile "Recreational" stretch of the river.

All of the aforementioned recreational activities — and accompanying economic benefits — are intricately connected to the pristine waters that originate and flow through the Upper Pecos Watershed. This scarce natural resource is the foundation upon which all plant and animal life in the area ultimately depend. In nominating the waters of the Upper Pecos Watershed as ONRWs, the petitioners intend to ensure that all of the surface waters of the State inside the nominated area are managed so that their outstanding recreational values are protected for generations to come.

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http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf.

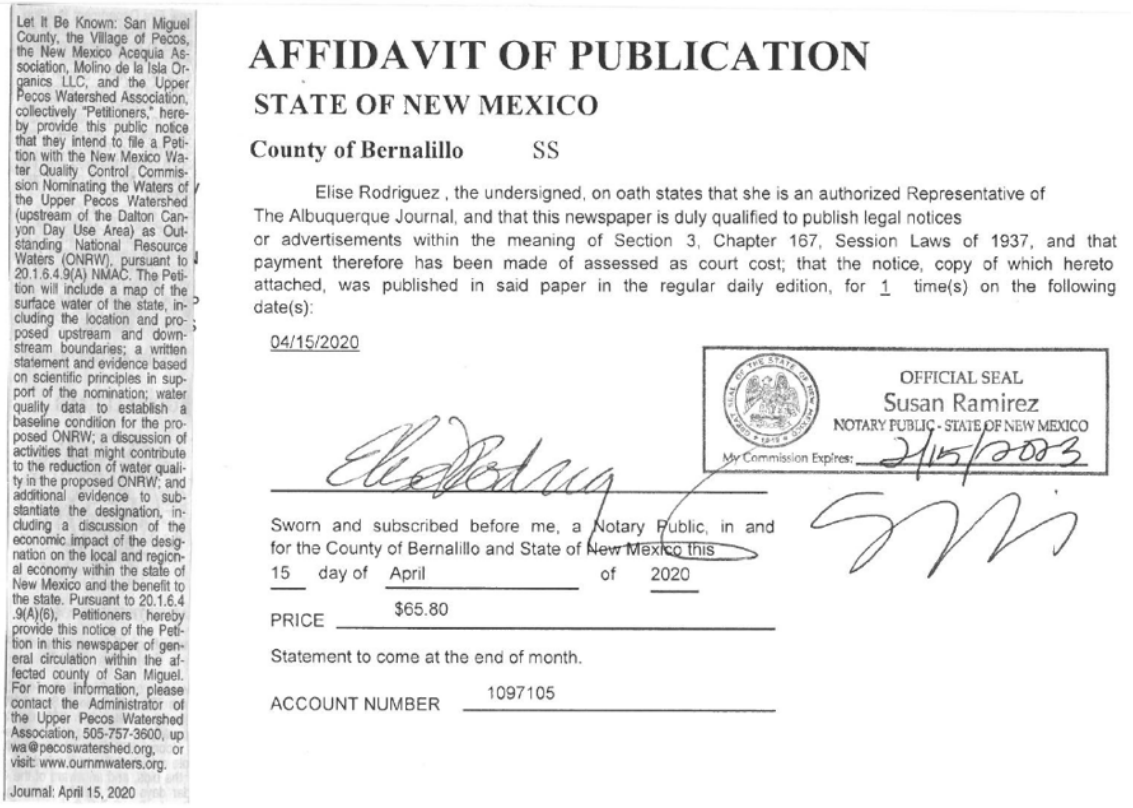
[77] *Id*. at 16, Table 6.

[78] *Id*. at 21. Table 11.

[79] *See infra*, Section 2.2.1.

SECTION 6: AFFIDAVIT OF PUBLICATION OF NOTICE OF THE PETITION

Affidavit 1: Albuquerque Journal.



Let It Be Known: San Miguel County, the Village of Pecos, the New Mexico Acequia Association, Molino de la Isla Organics LLC, and the Upper Pecos Watershed Association, collectively "Petitioners," hereby provide this public notice that they intend to file a Petition with the New Mexico Water Quality Control Commission Nominating the Waters of the Upper Pecos Watershed (upstream of the Dalton Canyon Day Use Area) as Outstanding National Resource Waters (ONRW), pursuant to 20.1.6.4.9(A) NMAC. The Petition will include a map of the surface water of the state, including the location and proposed upstream and downstream boundaries; a written statement and evidence based on scientific principles in support of the nomination; water quality data to establish a baseline condition for the proposed ONRW; a discussion of activities that might contribute to the reduction of water quality in the proposed ONRW; and 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. Pursuant to 20.1.6.4.9(A)(6), Petitioners hereby provide this notice of the Petition in this newspaper of general circulation within the affected county of San Miguel. For more information, please contact the Administrator of the Upper Pecos Watershed Association, 505-757-3600, upwa@pecoswatershed.org, or visit: www.ournmwaters.org.

Journal: April 15, 2020

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of Bernalillo SS

Elise Rodriguez , the undersigned, on oath states that she is an authorized Representative of The Albuquerque Journal, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

04/15/2020

OFFICIAL SEAL
Susan Ramirez
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: 2/15/2023

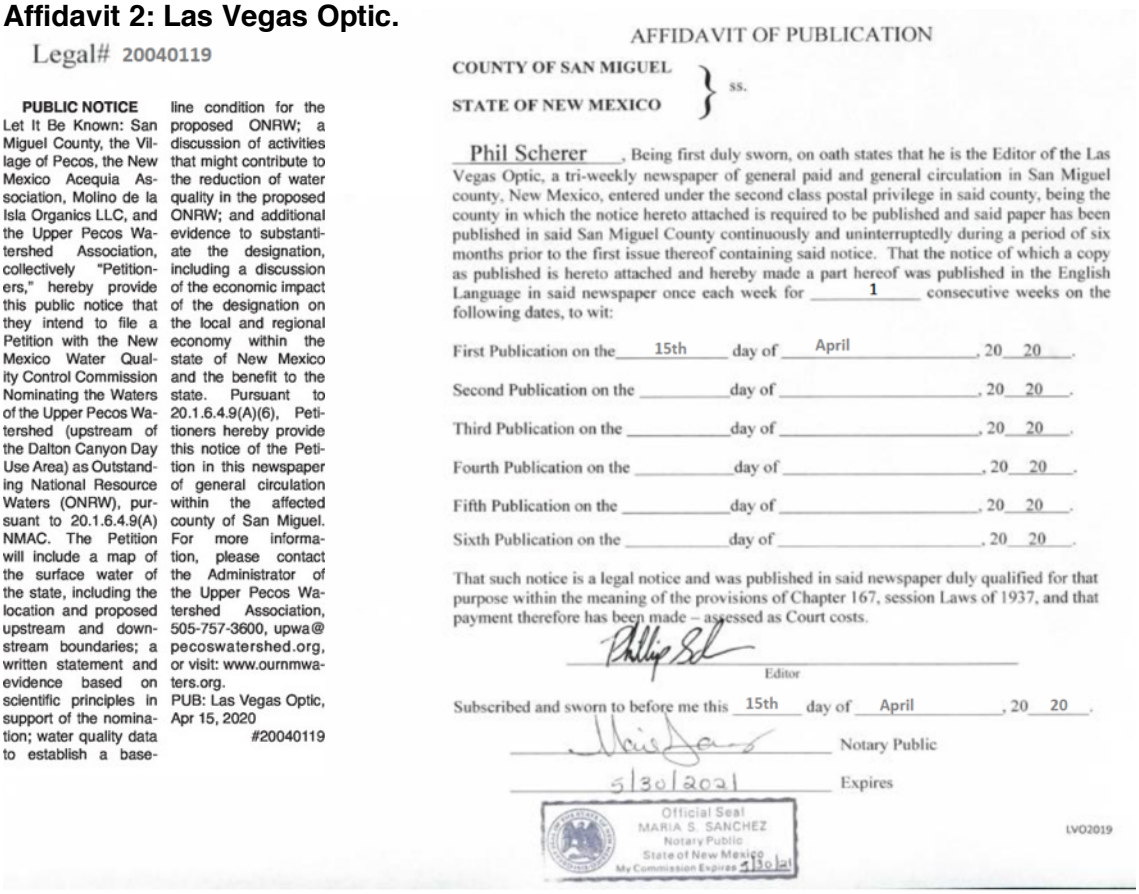
Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 15 day of April of 2020

PRICE $65.80

Statement to come at the end of month.

ACCOUNT NUMBER 1097105

Affidavit 2: Las Vegas Optic.



Legal# 20040119

PUBLIC NOTICE

Let It Be Known: San Miguel County, the Village of Pecos, the New Mexico Acequia Association, Molino de la Isla Organics LLC, and the Upper Pecos Watershed Association, collectively "Petitioners," hereby provide this public notice that they intend to file a Petition with the New Mexico Water Quality Control Commission Nominating the Waters of the Upper Pecos Watershed (upstream of the Dalton Canyon Day Use Area) as Outstanding National Resource Waters (ONRW), pursuant to 20.1.6.4.9(A) NMAC. The Petition will include a map of the surface water of the state, including the location and proposed upstream and downstream boundaries; a written statement and evidence based on scientific principles in support of the nomination; water quality data to establish a baseline condition for the proposed ONRW; a discussion of activities that might contribute to the reduction of water quality in the proposed ONRW; and 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. Pursuant to 20.1.6.4.9(A)(6), Petitioners hereby provide this notice of the Petition in this newspaper of general circulation within the affected county of San Miguel. For more information, please contact the Administrator of the Upper Pecos Watershed Association, 505-757-3600, upwa@pecoswatershed.org, or visit: www.ournmwaters.org.

PUB: Las Vegas Optic, Apr 15, 2020

#20040119

AFFIDAVIT OF PUBLICATION

COUNTY OF SAN MIGUEL } ss.
STATE OF NEW MEXICO }

Phil Scherer , Being first duly sworn, on oath states that he is the Editor of the Las Vegas Optic, a tri-weekly newspaper of general paid and general circulation in San Miguel county, New Mexico, entered under the second class postal privilege in said county, being the county in which the notice hereto attached is required to be published and said paper has been published in said San Miguel County continuously and uninterruptedly during a period of six months prior to the first issue thereof containing said notice. That the notice of which a copy as published is hereto attached and hereby made a part hereof was published in the English Language in said newspaper once each week for 1 consecutive weeks on the following dates, to wit:

First Publication on the 15th day of April, 20 20.

Second Publication on the _____ day of _____, 20 20.

Third Publication on the _____ day of _____, 20 20.

Fourth Publication on the _____ day of _____, 20 20.

Fifth Publication on the _____ day of _____, 20 20.

Sixth Publication on the _____ day of _____, 20 20.

That such notice is a legal notice and was published in said newspaper duly qualified for that purpose within the meaning of the provisions of Chapter 167, session Laws of 1937, and that payment therefore has been made – assessed as Court costs.

Editor

Subscribed and sworn to before me this 15th day of April, 20 20.

Notary Public

5/30/2021 Expires

Official Seal
MARIA S. SANCHEZ
Notary Public
State of New Mexico
My Commission Expires 5/30/21

LVO2019

Appendix A: Resolutions Passed by Petitioners New Mexico Acequia Association, Village of Pecos, and San Miguel County, and Letter of Support from Jemez Pueblo in Support of Petition to Designate the Nominated Waters as ONRW

Appendix B: New Mexico Department of Game and Fish Angler Use Data for Pecos River and Eight Tributaries, from the Village of Pecos to Cowles

Appendix C: Water Quality Data from the New Mexico Environment Department

Appendix D: Wildlife and Plant Species Data from the New Mexico Department of Game and Fish

Appendix E: New Mexico State Endangered Plant Species

An ONRW designation for the Upper Pecos would help ensure that the watershed continues to flourish in harmony with thriving, resilient ecosystems and communities for generations to come.

Appendix A: Resolutions Passed by Petitioners New Mexico Acequia Association, Village of Pecos, and San Miguel County in Support of Petition to Designate the Nominated Waters as ONRW

New Mexico Acequia Association Resolution

Resolution 2019-03

Opposing a Proposed Mining Operation in the Pecos Watershed and
Supporting Strong Measures to Protect Water Quality

WHEREAS, on June 6, 2019 the Santa Fe National Forest announced that it had received a Plan of Operations from Comexico LLC ("Comexico"), the American subsidiary of New World Cobalt, an Australian company, to conduct mineral exploration on previously identified deposits in the Pecos/Las Vegas Ranger District;

WHEREAS, the New Mexico Energy Minerals and Natural Resources Department (EMNRD) has received an application from Comexico for mineral exploration in the Jones Hill area in the Pecos River Watershed;

WHEREAS, the Pecos River Watershed provides critical water resources to downstream communities, including municipal, domestic, and agricultural users and provides clean water to the numerous agriculturally and culturally significant acequia systems;

WHEREAS, the Pecos River is one of the longest, in-state originating rivers affecting communities from the headwaters near Pecos to the Gulf of Mexico,

WHEREAS, in 1991, runoff from a previous mine near the proposed Comexico site(s) sent toxic metals into the Pecos River, killing nearly 10,000 trout in the nearby fish hatchery;

WHEREAS, on January 28, 2019, the State Engineer ordered a moratorium in perpetuity on permitting and drilling new wells near the old mine site to protect human health because groundwater near the old mine is contaminated with several toxic metals;

WHEREAS, the cost of remediation of the old mine has cost New Mexico $28 million;

WHEREAS, many farmers and ranchers who rely on acequias for irrigation water would suffer hardship from contamination if toxic metals were washed into the Pecos River from the Comexico mining sites or from mine tailings;

WHEREAS, clean water is essential for the health and wellbeing of acequia communities, including families, children, elders, and pregnant women, along the Pecos River for livestock, small-scale farming and ranching, organic gardening, and recreation,

WHEREAS, Outstanding National Resource Water (ONRW) protections outlined in the state water quality standards prohibit increased pollution to waters, do not affect existing uses traditional uses, and specifically exempt acequia operations from any additional requirements: "Acequia operation, maintenance, and repairs are not subject to new requirements because of ONRW designation." 20.6.2.A(3)(e) NMAC;

WHEREAS, farming and ranching traditions and other traditional uses depend on clean water and an ONRW can help to protect water quality and it should be implemented in such a way to

protect communities from polluting industries while ensuring that farming and livestock operations are not adversely affected,

WHEREAS, the Mining Act of 1872 has not been updated to effectively protect natural resources and does not allow public lands agencies to prohibit mining to protect clean water and for this reason it is widely considered to be outdated;

WHEREAS, the state mining regulations do not require notice to acequias of mining applications, the NMAA requested a hearing by the Mining and Minerals Division of EMNRD to consider the effects of the Comexico application on some fifty-five downstream acequias, the request for hearing was granted, and the hearing will be scheduled in the coming months;

NOW, THEREFORE, BE IT RESOLVED that the New Mexico Acequia Association opposes the proposed Comexico mining operations in the Pecos River Watershed;

BE IT FURTHER RESOLVED that the NMAA will commit to working with the New Mexico Acequia Commission and local acequias to conduct education and outreach to acequia parciantes about the potential impacts of mining on the Pecos River Watershed and on their farms and ranches and to provide comment and testimony in the regulatory process;

BE IT FURTHER RESOLVED that the NMAA supports a petition by San Miguel County and the Village of Pecos to pursue Outstanding National Resource Water (ONRW) protections for the threatened portion of the Pecos River and associated tributaries;

BE IT FURTHER RESOLVED that NMAA supports reform of the 1872 Mining Act including recent legislation such as the Hardrock Mining and Reform Act of 2019 introduced by Senator Udall and Senator Heinrich and the Hardrock Leasing and Reclamation Act of 2019 introduced by Representative Grijalva;

BE IT FURTHER RESOLVED that copies of this resolution will be forwarded to San Miguel County, the Village of Pecos, Cow Creek Regional Acequia Association, the Mining and Minerals Division of the NM Energy, Minerals, and Natural Resources Department, the NM Environment Department, NM State Legislative leadership, the New Mexico Acequia Commission, and Governor Michelle Lujan Grisham.

Village of Pecos Resolution

Resolution 2019-126

Resolution in support of Protecting Our Local Watershed from Future Degradation through Outstanding National Resource Water (ONRW) Protections and in support of Petitioning the New Mexico Water Quality Control Commission to Officially Designate the Pecos River as an ONRW.

Whereas, the Pecos River Watershed provides clean water to the communities of San Miguel County, including municipal, domestic, and agricultural users and provides clean water to the numerous ancient and agriculturally and culturally significant acequia systems; and,

WHEREAS, clean water is essential for the health and wellbeing of San Miguel County residents;

WHEREAS, many residents and visitors depend on the Pecos River Watershed for recreational activities such as fishing, camping, swimming, and hiking; and,

WHEREAS, the local economy is dependent on clean water to support recreation-based economic activities; and,

WHEREAS, Outstanding National Resource Water (ONRW) protections outlined in the state water quality standards prohibit new and increased pollution to waters; and,

WHEREAS, Outstanding National Resources Water (ONRW) protections protect and do not inhibit traditional and historic uses of the river; and,

Now THREFORE, BE IT RESOLVED BY THE VILLAGE OF PECOS that the village supports pursuing Outstanding National Resource Water (ONRW) protections for the upper portion of the Pecos River and associated tributaries.

BE IT FURTHER RESOLVED THAT, the Village will join with other interested parties in petitioning the New Mexico Water Quality Control Commission to designate the Pecos River as a n Outstanding National Resource Water (ONRW).

ATTEST:

VILLAGE OF PECOS
OFFICIAL SEAL
PECOS, NEW MEXICO

Ramona Quintana, Clerk

Telesfor A. Benavidez, Mayor

Kathy A. Romero, Village Treasurer/Accountant

Herman Gallegos, Mayor Pro-Tem

Ralph Lopez, Trustee

Brian Sandoval, Trustee

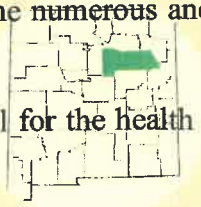
Armando Gabaldon, Trustee

Board of County Commissioners

Resolution 11-12-19-ONRW

RESOLUTION IN SUPPORT OF PROTECTING OUR LOCAL WATERSHED FROM FUTURE DEGRADATION BY PETITIONING THE NEW MEXICO WATER QUALITY CONTROL COMMISSION TO DESIGNATE THE PECOS RIVER AS AN OUTSTANDING NATIONAL RESOURCE WATER.

WHEREAS, the Pecos River Watershed provides critical water resources to the communities of San Miguel County, including municipal, domestic, and agricultural users and provides clean water to the numerous ancient and agriculturally and culturally significant acequia systems;



WHEREAS, clean water is essential for the health and wellbeing of San Miguel County residents;

WHEREAS, many residents and visitors depend on the Pecos River Watershed for recreational activities such as fishing, camping, swimming, and hiking;

WHEREAS, the local economy is dependent on clean water to support recreation-based economic activities;

WHEREAS, Outstanding National Resource Water protections outlined in state water quality regulations prohibit new and increased pollution to waters designated as an Outstanding National Resource Water;

WHEREAS, Outstanding National Resource Water protections protect and do not inhibit traditional and historic uses of waters designated as an Outstanding National Resource Water;

NOW, THEREFORE, BE IT RESOLVED BY SAN MIGUEL COUNTY that the County supports pursuing Outstanding National Resource Water protections for the Pecos River and associated tributaries from Dalton Canyon upstream.

500 West National Ave, Ste. 201 Las Vegas, New Mexico 87701 (505) 426-9333 phone (505) 425-7019 fax

BE IT FURTHER RESOLVED THAT, the County will join with other interested parties in petitioning the New Mexico Water Quality Control Commission to designate the upper portion of the Pecos River and associated tributaries as an Outstanding National Resource Water.

Passed and Approved on this 12 day of November 2019, by the Board of Commissioners of San Miguel County, New Mexico.

Maria L. Martinez
Chair
District 4

Harold M. Garcia
Vice-Chair
District 1

Janice Varela
Commissioner
District 2

Max O. Trujillo
Commissioner
District 3

Chris Najar
Commissioner
District 5

ATTEST:

Geraldine E. Gutierrez
San Miguel County Clerk

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

Dave Romero Jr.
San Miguel County Attorney

WALATOWA

PUEBLO of JEMEZ

February 26, 2020

New Mexico Water Quality Control Commission
1190 Saint Francis Drive
Suite #South 2102
Santa Fe, New Mexico 87505

To Whom It May Concern:

I am submitting this formal letter of support to designate the Upper Pecos River as "Outstanding National Resource Waters" for the state of New Mexico. The Pueblo feels very strongly towards the need for protecting this pristine water resource. This stretch of the Pecos River is the lifeblood of the people and the ecosystems that are connected to this very special place on our Pecos ancestral homelands.

"Water is life" and we can't stress that enough! Our Pecos ancestors called the Pecos River *Tǫǫk'ô P'ą̊ągee* which can be interpreted as Corn Cob River because its waters sustained the people and the corn that was planted by them up and down the Pecos River Valley or as we call it *Tǫǫk'ô P'ą̊ąwâamu*, Corn Cob River Valley.

Today, the descendants of the Pecos continue to visit the sacred shrines on the Pecos ancestral homeland including the upper Pecos Watershed and perform ceremonies using the sacred waters of the Pecos River. Many other tribal nations also use this cultural landscape and the waters of the Pecos River to perform their own ceremonies. We as Native Peoples see the sacredness of the water ecosystems that sustain life to all the birds and animals, plants and the aquatic life that humans greatly benefit from.

To ensure the protection needed for this precious water and the ecosystems for the future generations of all peoples that connect themselves to the Pecos River, Jemez Pueblo enthusiastically supports the efforts to have the Upper Pecos designated as Outstanding National Resource Waters.

Thank you for your efforts to protect the sacred waters of the Upper Pecos River. May your efforts and the efforts of your colleagues be blessed by Our Creator and may your lives be enriched with love and peace. If you have any questions or, if you wish to further discuss the support of the Pueblo, please do not hesitate to call me at (575) 834-7359.

Sincerely,

David M. Toledo
Governor

Elston Yepa
2nd Lt./Pecos Governor

Office of the Governor
4471 Highway 4, Box 100 • Jemez Pueblo • New Mexico • 87024
(575) 834-7359 • Fax (575) 834-7331

Appendix B: New Mexico Department of Fish and Game Angler Use Data for Pecos River and Eight Tributaries, from the Village of Pecos to Cowles

PECOS RIVER (COWLES TO VILLAGE OF PECOS)

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	1997-98	95179
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	1998-99	82987
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	1999-00	120976
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2000-01	102572
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2001-02	142369
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2003-04	103489
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2007-08	108367
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2015-16	83743
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2016-17	133717
PECOS RIVER (COWLES TO VILLAGE OF PECOS)	2018-19	140835

INDIAN CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
INDIAN CREEK	2001-02	47

HOLY GHOST CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
HOLY GHOST CREEK	1997-98	1990
HOLY GHOST CREEK	1998-99	1310
HOLY GHOST CREEK	1999-00	859
HOLY GHOST CREEK	2000-01	700
HOLY GHOST CREEK	2001-02	847
HOLY GHOST CREEK	2003-04	2764
HOLY GHOST CREEK	2007-08	1500
HOLY GHOST CREEK	2015-16	590
HOLY GHOST CREEK	2016-17	601
HOLY GHOST CREEK	2018-19	1660

WILLOW CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
WILLOW CREEK (Pecos Drainage)	1997-98	855
WILLOW CREEK (Pecos Drainage)	1998-99	4540
WILLOW CREEK (Pecos Drainage)	1999-00	224
WILLOW CREEK (Pecos Drainage)	2000-01	94
WILLOW CREEK (Pecos Drainage)	2001-02	216
WILLOW CREEK (Pecos Drainage)	2003-04	1121
WILLOW CREEK (Pecos Drainage)	2016-17	52

RIO MORA

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
MORA (PECOS RIVER DRAINAGE)	1997-98	873
MORA (PECOS RIVER DRAINAGE)	1998-99	1540
MORA (PECOS RIVER DRAINAGE)	1999-00	353
MORA (PECOS RIVER DRAINAGE)	2000-01	1286
MORA (PECOS RIVER DRAINAGE)	2001-02	2169
MORA (PECOS RIVER DRAINAGE)	2003-04	588
MORA (PECOS RIVER DRAINAGE)	2007-08	855
MORA (PECOS RIVER DRAINAGE)	2015-16	1683
MORA (PECOS RIVER DRAINAGE)	2016-17	2732
MORA (PECOS RIVER DRAINAGE)	2018-19	963

WINSOR CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
WINSOR CREEK	1997-98	636
WINSOR CREEK	1998-99	560
WINSOR CREEK	1999-00	514
WINSOR CREEK	2000-01	414
WINSOR CREEK	2003-04	738
WINSOR CREEK	2007-08	1449
WINSOR CREEK	2015-16	62
WINSOR CREEK	2016-17	422

PANCHUELA CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
PANCHUELA CREEK	1997-98	80
PANCHUELA CREEK	1999-00	104
PANCHUELA CREEK	2000-01	308
PANCHUELA CREEK	2001-02	101
PANCHUELA CREEK	2003-04	682
PANCHUELA CREEK	2007-08	742
PANCHUELA CREEK	2015-16	211
PANCHUELA CREEK	2016-17	1093
PANCHUELA CREEK	2018-19	1410

BEAR CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
BEAR CREEK	2000-01	93

JACK'S CREEK

Use and Harvest by Water		
dgf_water_name	Year	SumOfT_days
JACKS CREEK	1997-98	246
JACKS CREEK	1998-99	156
JACKS CREEK	1999-00	235
JACKS CREEK	2001-02	289
JACKS CREEK	2007-08	790
JACKS CREEK	2015-16	124
JACKS CREEK	2016-17	330
JACKS CREEK	2018-19	159

Appendix C: Water Quality Data from NMED

Part 1: Dalton Canyon Creek Chem Data
https://westernlaw.org/wp-content/uploads/2020/04/1-Appendix-C-NMED-Water-Quality-Data-Upper-Pecos-2010-Chem-Data.xlsx

Part 2: Dalton Canyon Creek Field Data
https://westernlaw.org/wp-content/uploads/2020/04/2-Appendix-C-NMED-Water-Quality-Data-Upper-Pecos-2010-Field-Data.xlsx

Part 3: Geomorphology Habitat 2010
https://westernlaw.org/wp-content/uploads/2020/04/3-Appendix-C-NMED-Water-Quality-Data-Upper-Pecos-2010-Geomorph-Habitat.xlsx

Part 4: Geomorphology Habitat 2014
https://westernlaw.org/wp-content/uploads/2020/04/4-Appendix-C-NMED-Water-Quality-Data-Upper-Pecos-2014-Geomorph-Habitat.xlsx

Part 5: Cave Creek Data
https://westernlaw.org/wp-content/uploads/2020/04/5-Appendix-C-NMED-Water-Quality-Data-BenthicTaxon_12-26-19_17_48_24.xlsx

Part 6: Fish Ecology Data 2000-2008
https://westernlaw.org/wp-content/uploads/2020/04/6-Appendix-C-NMED-Water-Quality-Data-FISH_ECOLOGY_REPORT_12-26-19_17_50_29-1.xlsx

Part 7: Field Data 2001-2007
https://westernlaw.org/wp-content/uploads/2020/04/7-Appendix-C-NMED-Water-Quality-Data-Pecos-2001-2007-Field-Data.xlsx

Part 8: Pecos River, Jack's Creek to Headwaters 2001-2007 Lab Data
https://westernlaw.org/wp-content/uploads/2020/04/8-Appendix-C-NMED-Water-Quality-Data-Pecos-2001-2007-Lab-Data.xlsx

Part 9: Holy Ghost Creek Data
https://westernlaw.org/wp-content/uploads/2020/04/9-Appendix-C-NMED-Water-Quality-Data-Holy-Ghost-1305260.xls

Part 10: Panchuela Creek Data
https://westernlaw.org/wp-content/uploads/2020/04/10-Appendix-C-NMED-Water-Quality-Data-Panchuela-1305250.xls

Part 11: Willow Lake to Headwaters
https://westernlaw.org/wp-content/uploads/2020/04/11-Appendix-C-NMED-Water-Quality-Data-Pecos-abv-Willow-584647.xls

Part 12: Pecos above Willow
https://westernlaw.org/wp-content/uploads/2020/04/12-Appendix-C-NMED-Water-Quality-Data-Pecos-abv-Willow-2386622.xls

Part 13: Pecos at Wilderness Boundary
https://westernlaw.org/wp-content/uploads/2020/04/13-Appendix-C-NMED-Water-Quality-Data-Pecos-at-wilderness-boundary-309476.xls

Part 14: Rio Mora above Pecos
https://westernlaw.org/wp-content/uploads/2020/04/14-Appendix-C-NMED-Water-Quality-Data-Rio-Mora-abv-Pecos.xls

Part 15: Willow above barrier
https://westernlaw.org/wp-content/uploads/2020/04/15-Appendix-C-NMED-Water-Quality-Data-Willow-abv-barrier-1305279.xls

Part 16: Willow below mine
https://westernlaw.org/wp-content/uploads/2020/04/16-Appendix-C-NMED-Water-Quality-Data-Willow-blw-mine-1305275.xls

Part 17: Winsor Data
https://westernlaw.org/wp-content/uploads/2020/04/17-Appendix-C-NMED-Water-Quality-Data-Winsor.xls

Appendix D: Wildlife and Plant Species Data from New Mexico Department of Game and Fish

PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Bear Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.789461 / -105.641378
County(s):	SAN MIGUEL
Project Description:	Request from Amigos Bravos for species lists for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

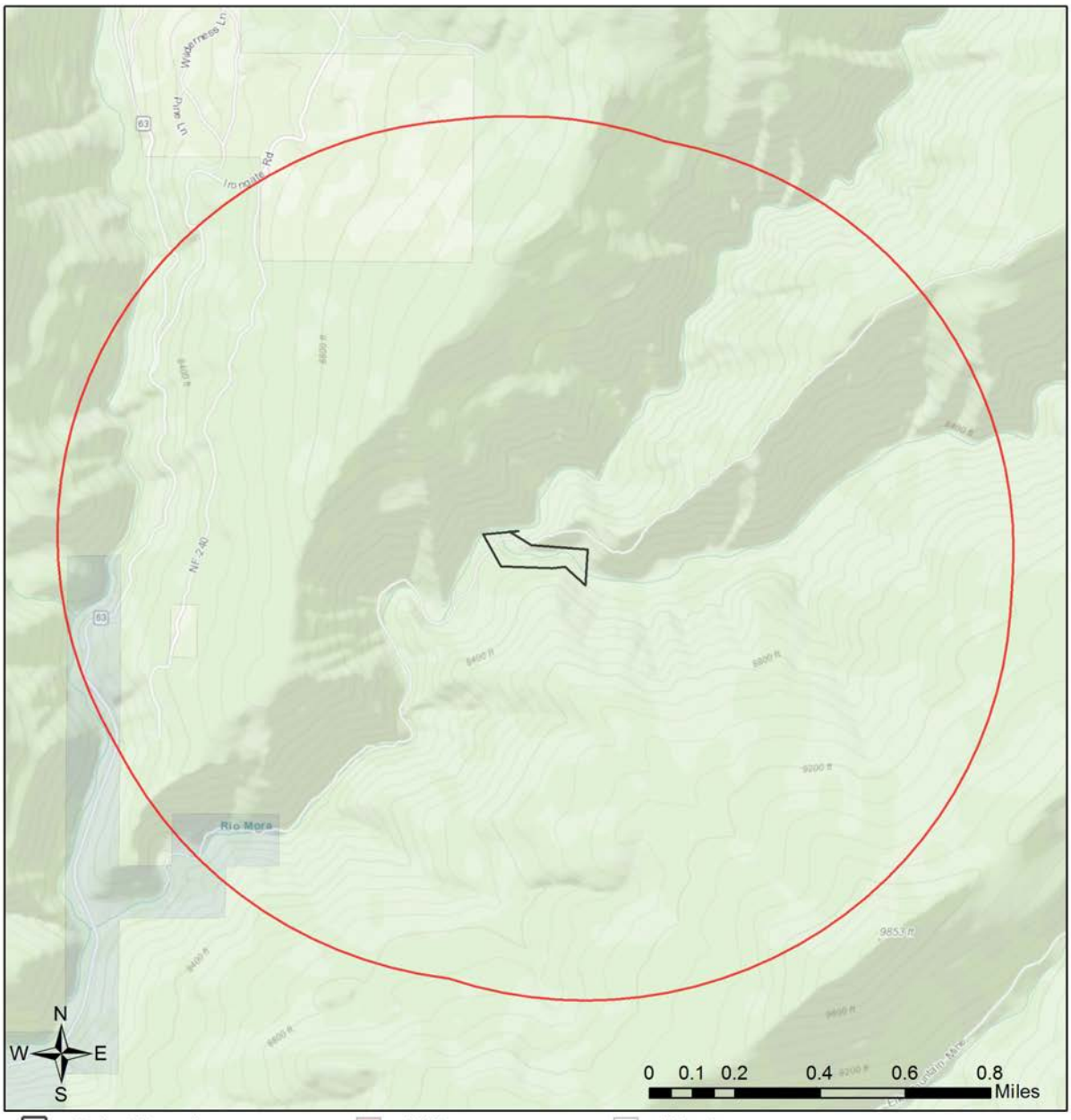
OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. You should be notified within 30 days whether there are further recommendations regarding this project proposal.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their Information for Planning and Consultation tool.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species distribution models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report can not guarantee species presence or absence at a precise point location, as might be indicated through comprehensive biological surveys. Specific questions regarding the potential for adverse impacts to vulnerable wildlife populations or habitats, especially in areas with a limited history of biological surveys, may require further on-site assessments.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to asses impacts once project details are developed. The New Mexico Crucial Habitat Assessment Tool is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

Pecos ONRW Petition - Bear Creek



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

Bureau of Land Management
Bureau of Reclamation
US Dept. of Agriculture
Military
Dept. of Energy
US Forest Service
Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Brown Trout	Salmo trutta			SERI
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Project Recommendations

Your proposed project activities may require a custom review for assessment of potential effects to wildlife. If the information provided under the "OVERALL STATUS" section above indicates that your project will be forwarded for review, a Department biologist will confirm whether any additional conservation measures are needed. You should expect to receive any additional project recommendations within 30 days of your project submission. If the "OVERALL STATUS" section indicates that no further consultation with the Department is required, you should not expect to receive additional project feedback from the Department, and you may proceed with project planning as indicated.

The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint should avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area. If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to the Department's habitat handbook guideline for Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems.

Disclaimers regarding recommendations:

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The New Mexico Endangered Plant Program, under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Carpenter Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.802099 / -105.677585
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

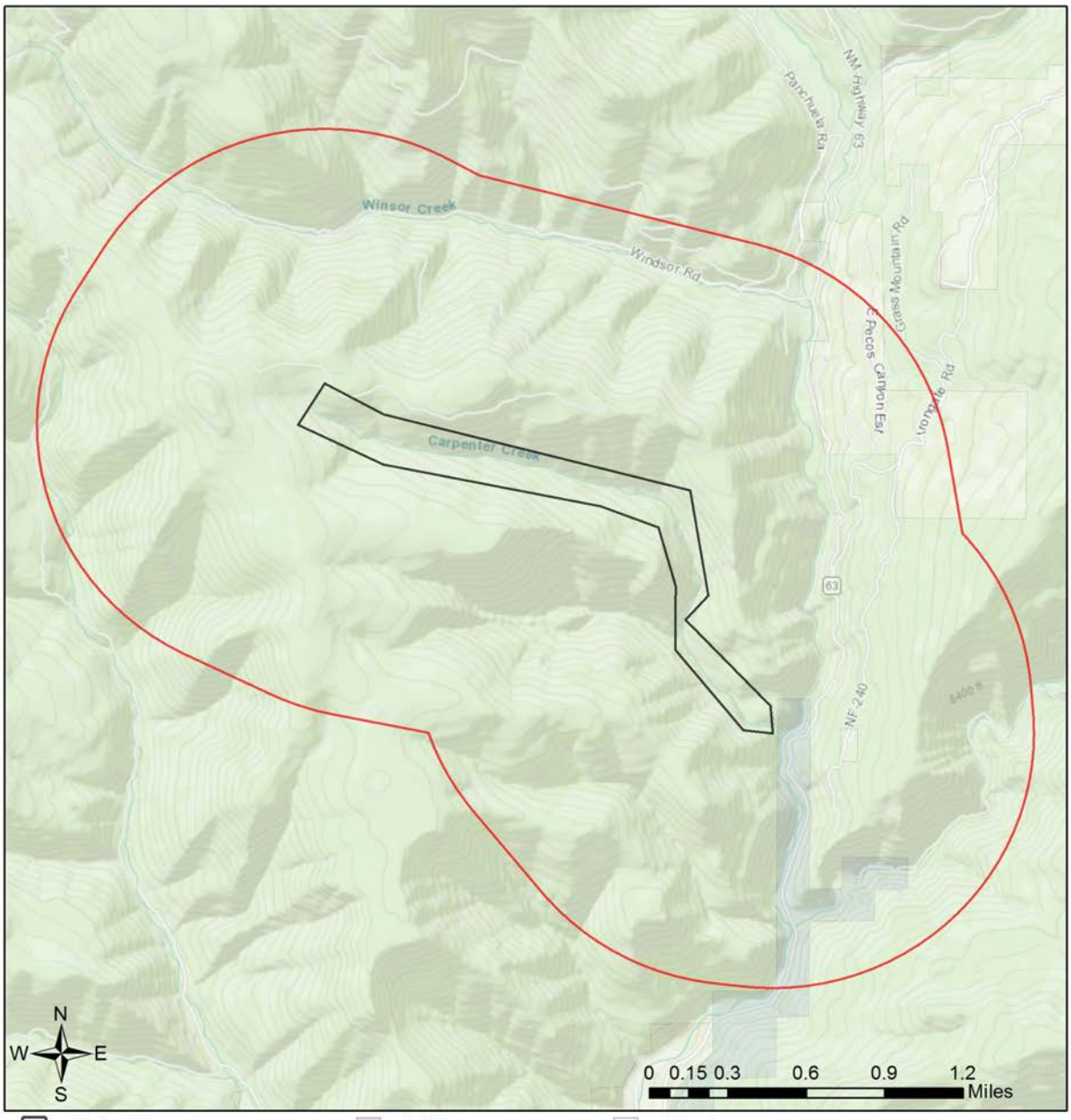
OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. You should be notified within 30 days whether there are further recommendations regarding this project proposal.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their Information for Planning and Consultation tool.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species distribution models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report can not guarantee species presence or absence at a precise point location, as might be indicated through comprehensive biological surveys. Specific questions regarding the potential for adverse impacts to vulnerable wildlife populations or habitats, especially in areas with a limited history of biological surveys, may require further on-site assessments.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to asses impacts once project details are developed. The New Mexico Crucial Habitat Assessment Tool is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

Pecos ONRW Petition - Carpenter Creek



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

Bureau of Land Management
Bureau of Reclamation
US Dept. of Agriculture
Military
Dept. of Energy
US Forest Service
Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Rainbow Trout	Oncorhynchus mykiss			SERI
Brown Trout	Salmo trutta			SERI
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Sapello Canyon Larkspur	Delphinium sapellonis			
Mountain Lily	Lilium philadelphicum var. andinum			
Hooded Ladies'-Tresses	Spiranthes romanzoffiana			

NMAC = New Mexico Administrative Code, NMRPCS = New Mexico Rare Plant Conservation Strategy, SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Dalton Canyon Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.668621 / -105.708679
County(s):	SAN MIGUEL; SANTA FE
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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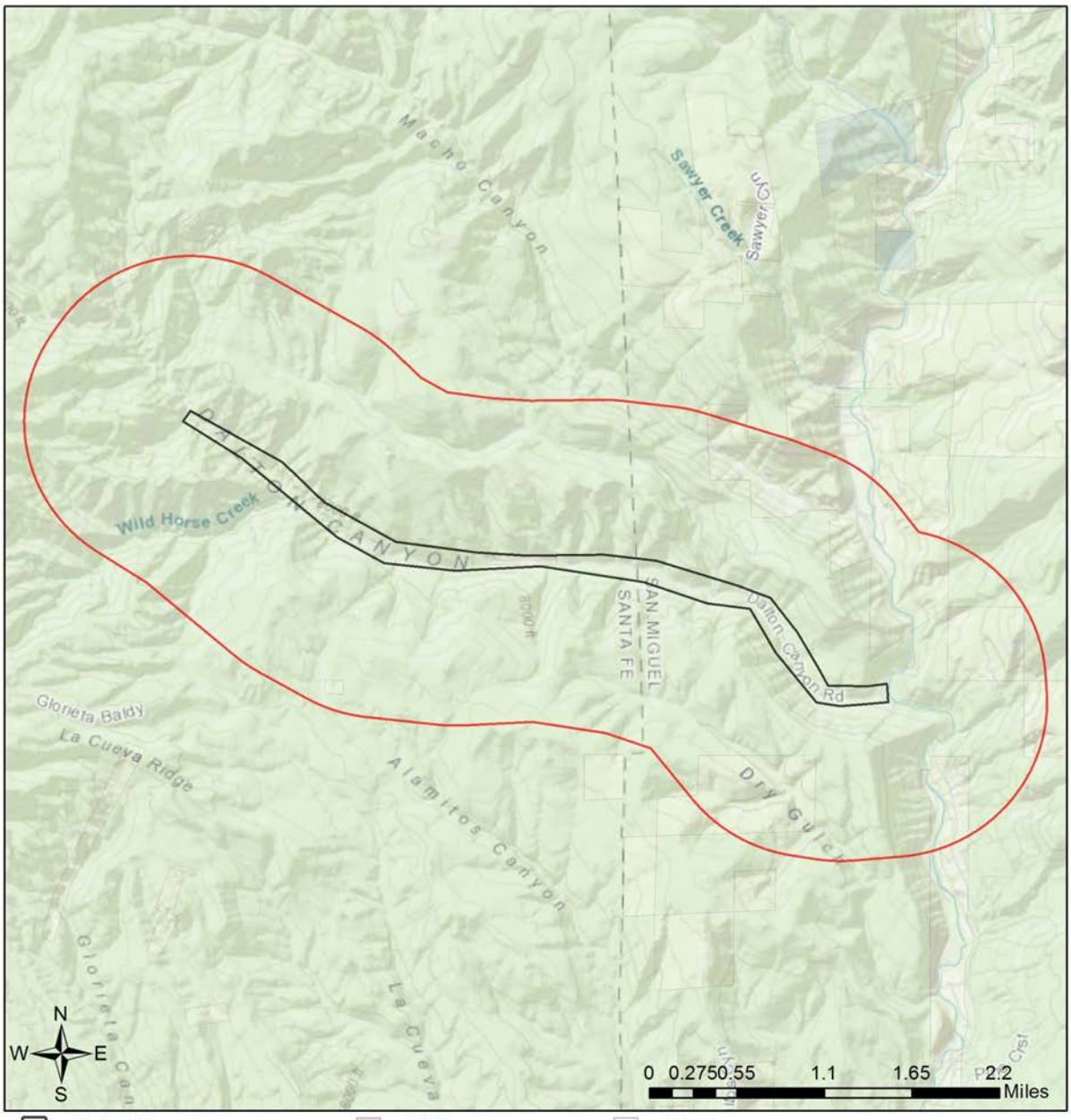
Pecos ONRW Petition - Dalton Canyon Creek



- Project Boundary
- Buffered Project Boundary

NM_SurfaceOwnership_2016

- Bureau of Land Management
- Bureau of Reclamation
- US Dept. of Agriculture
- Military
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Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Long-Billed Curlew	Numenius americanus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida			SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SERI
Spotted Bat	Euderma maculatum		T	SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Mountain Lily	Lilium philadelphicum var. andinum			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Doctor Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.772826 / -105.728461
County(s):	SAN MIGUEL; SANTA FE
Project Description:	Species list request for ONRW petition .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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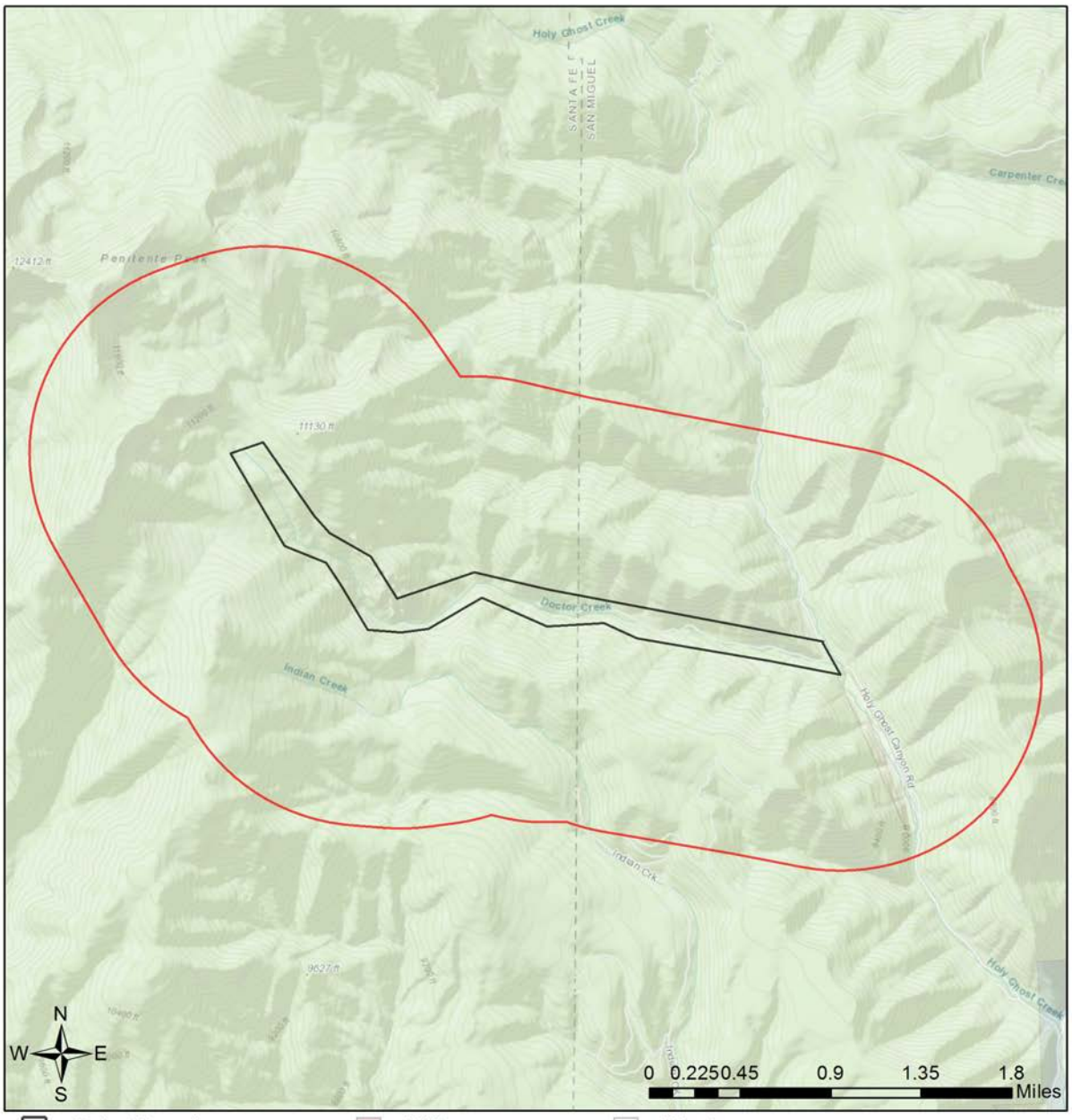

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American Pika	Ochotona princeps			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Pacific Marten	Martes caurina			SGCN
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Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Hooded Ladies'-Tresses	Spiranthes romanzoffiana			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Davis Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.741204 / -105.664616
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW Petition .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
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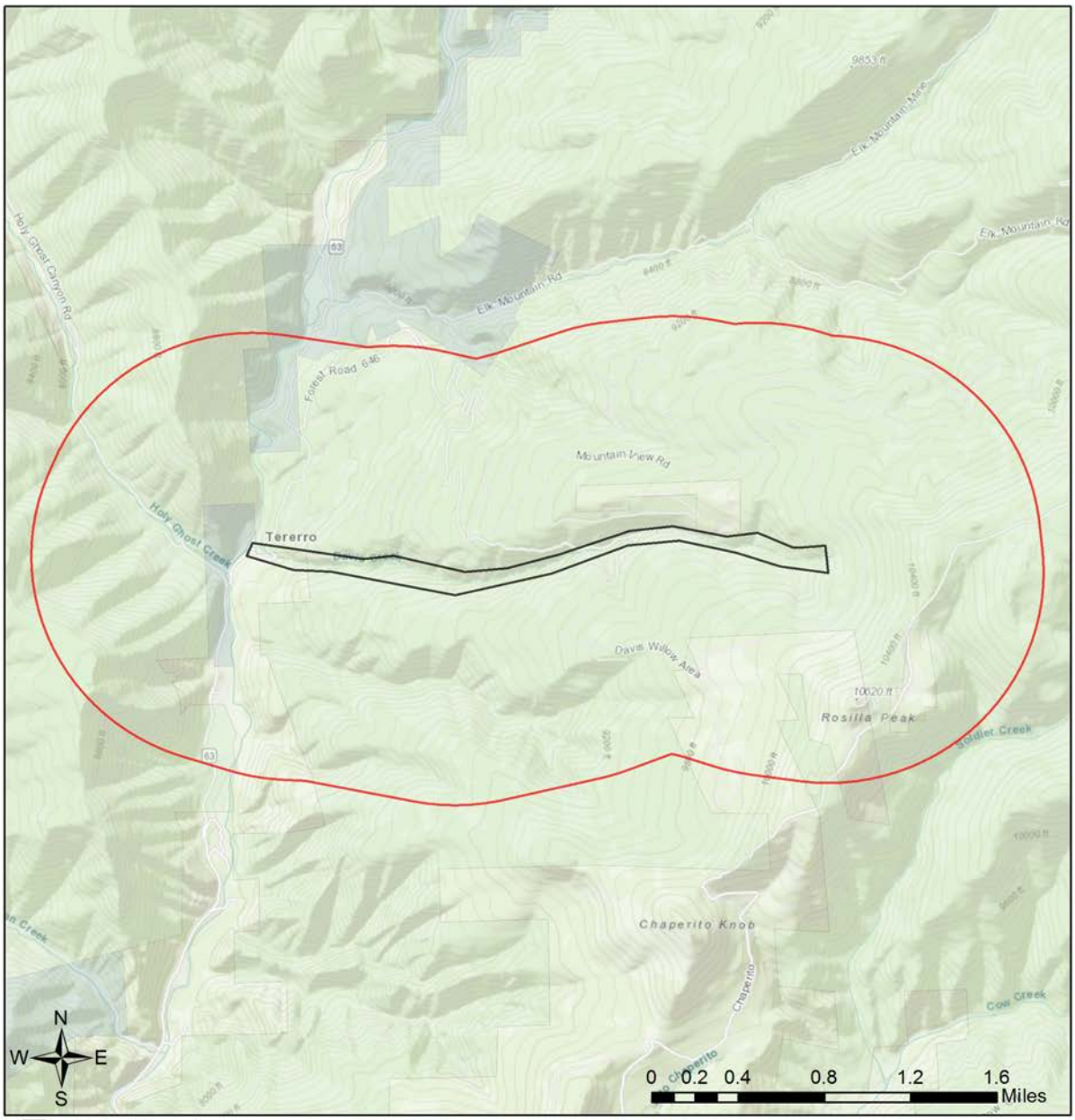

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Holy Ghost Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.760233 / -105.693154
County(s):	SAN MIGUEL
Project Description:	Species List request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
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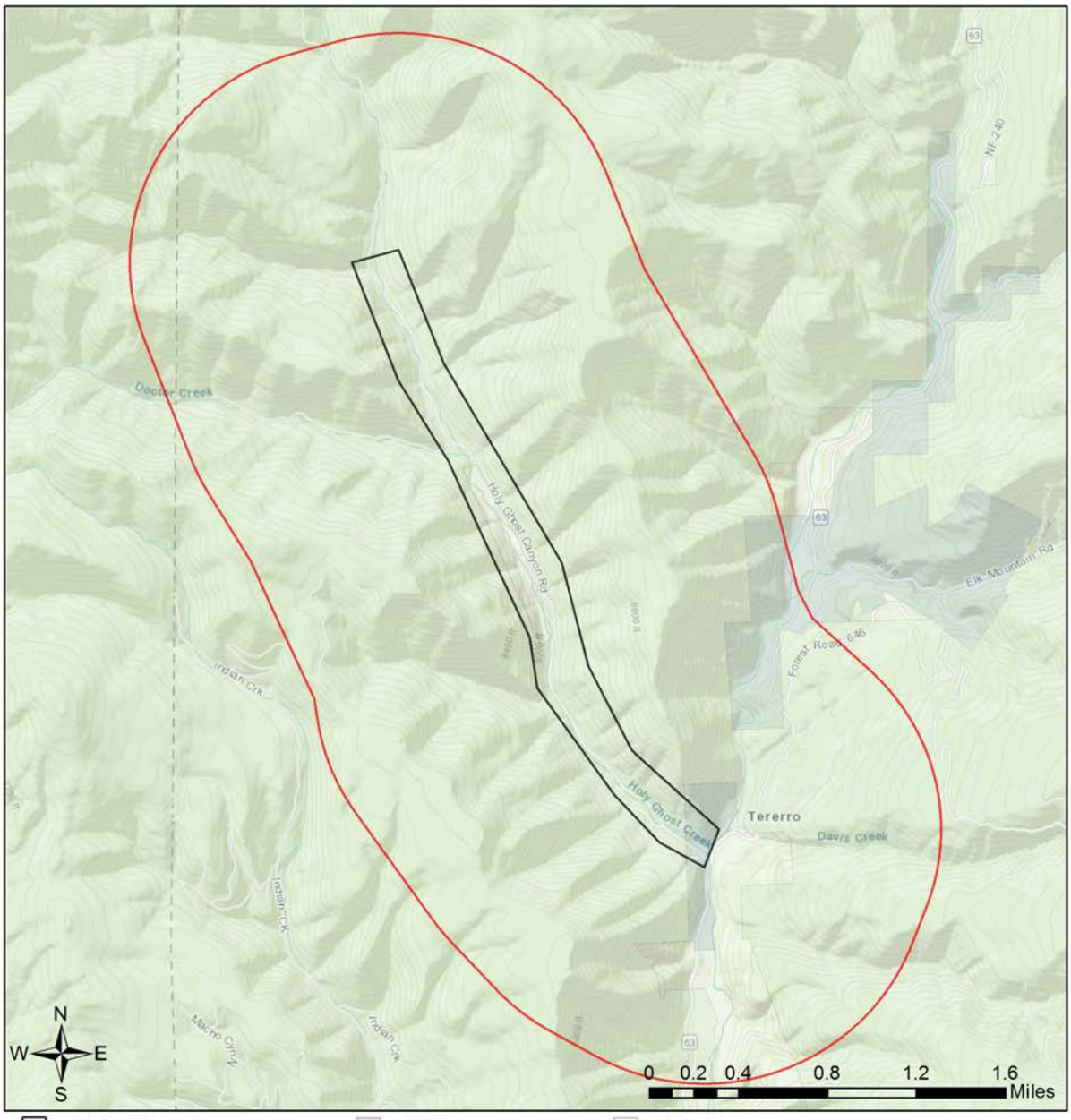

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Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Cutthroat Trout	Oncorhynchus clarkii			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SGCN
Brown Trout	Salmo trutta			SERI
White Sucker	Catostomus commersonii			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
A Cave Obligate Springtail	Tomocerus grahami			SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Mountain Lily	Lilium philadelphicum var. andinum			

NMAC = New Mexico Administrative Code, NMRPCS = New Mexico Rare Plant Conservation Strategy, SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

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- Restrictions on noise-generating activities between Dec. 1 and Apr. 15. These activities would include oil and gas well pad development and operation that exposes wildlife to noises loud noises (at or above 48.6 dB(A) Leq at 400 feet in any direction from the source) from drilling, compressors, and pumping stations.
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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Indian Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.752793 / -105.716058
County(s):	SAN MIGUEL; SANTA FE
Project Description:	Species list request for ONRW petition .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

OVERALL STATUS

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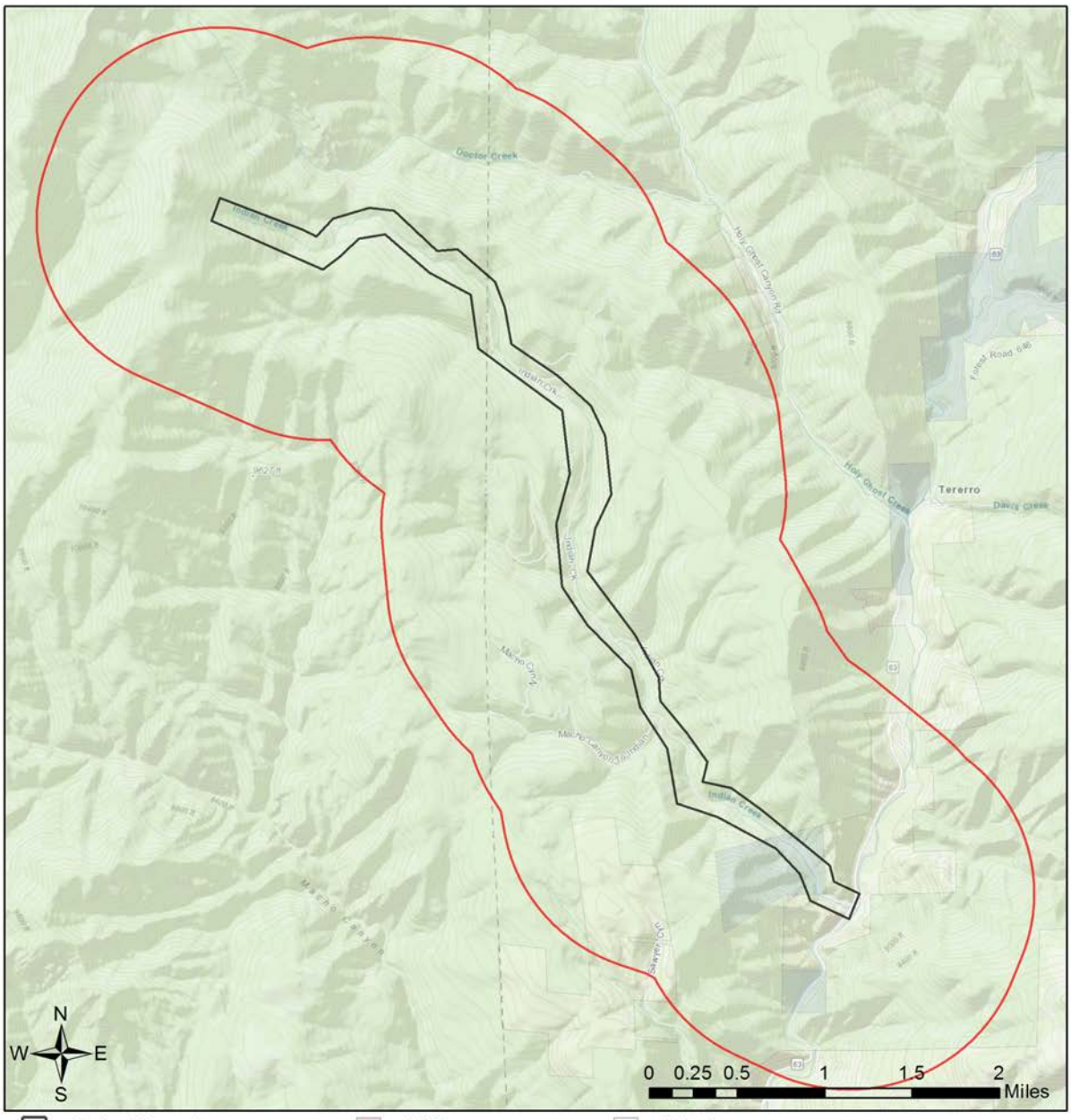
Pecos ONRW Petition - Indian Creek



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

Bureau of Land Management
Bureau of Reclamation
US Dept. of Agriculture
Military
Dept. of Energy
US Forest Service
Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
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Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida			SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Boreal Owl	Aegolius funereus			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
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Spotted Bat	Euderma maculatum		T	SGCN
American Pika	Ochotona princeps			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			

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Your proposed project occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, your project should consider measures to avoid the following.

- Altering surface or groundwater flow or hydrology,
- Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation.
- Affecting local surface or groundwater quality.
- Creating disturbance to wildlife utilizing these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities.

Department biologists are available for site-specific consultation regarding measures to assist with management and conservation of these habitat resources.

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Jack's Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.832150 / -105.660149
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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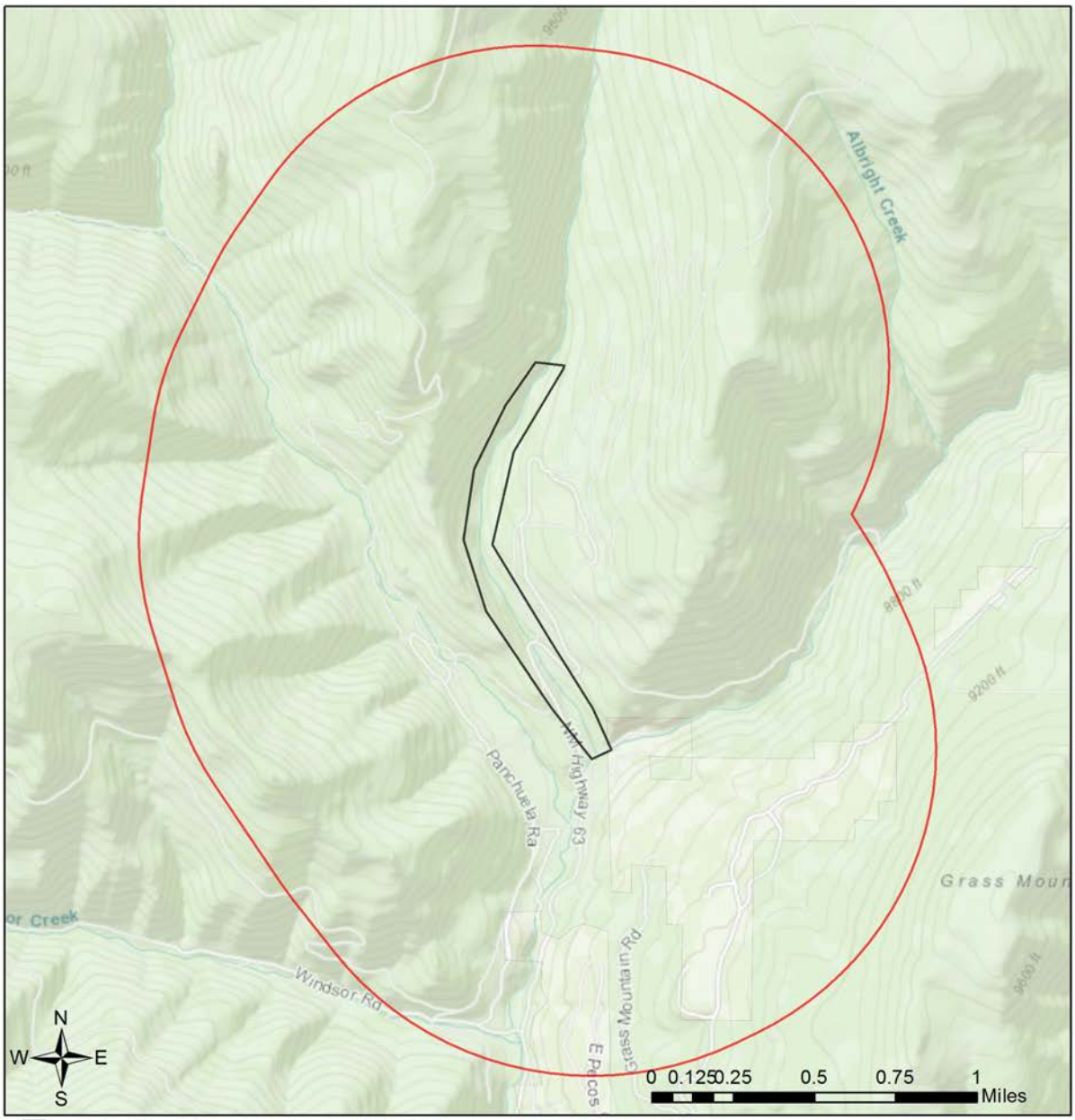
Pecos ONRW Petition - Jack's Creek



Project Boundary
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NM_SurfaceOwnership_2016

Bureau of Land Management
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Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
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Northern Goshawk	Accipiter gentilis			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
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Elk	Cervus canadensis nelsoni			SERI
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Sapello Canyon Larkspur	Delphinium sapellonis			
Mountain Lily	Lilium philadelphicum var. andinum			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Macho Canyon Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.709851 / -105.737069
County(s):	SAN MIGUEL; SANTA FE
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
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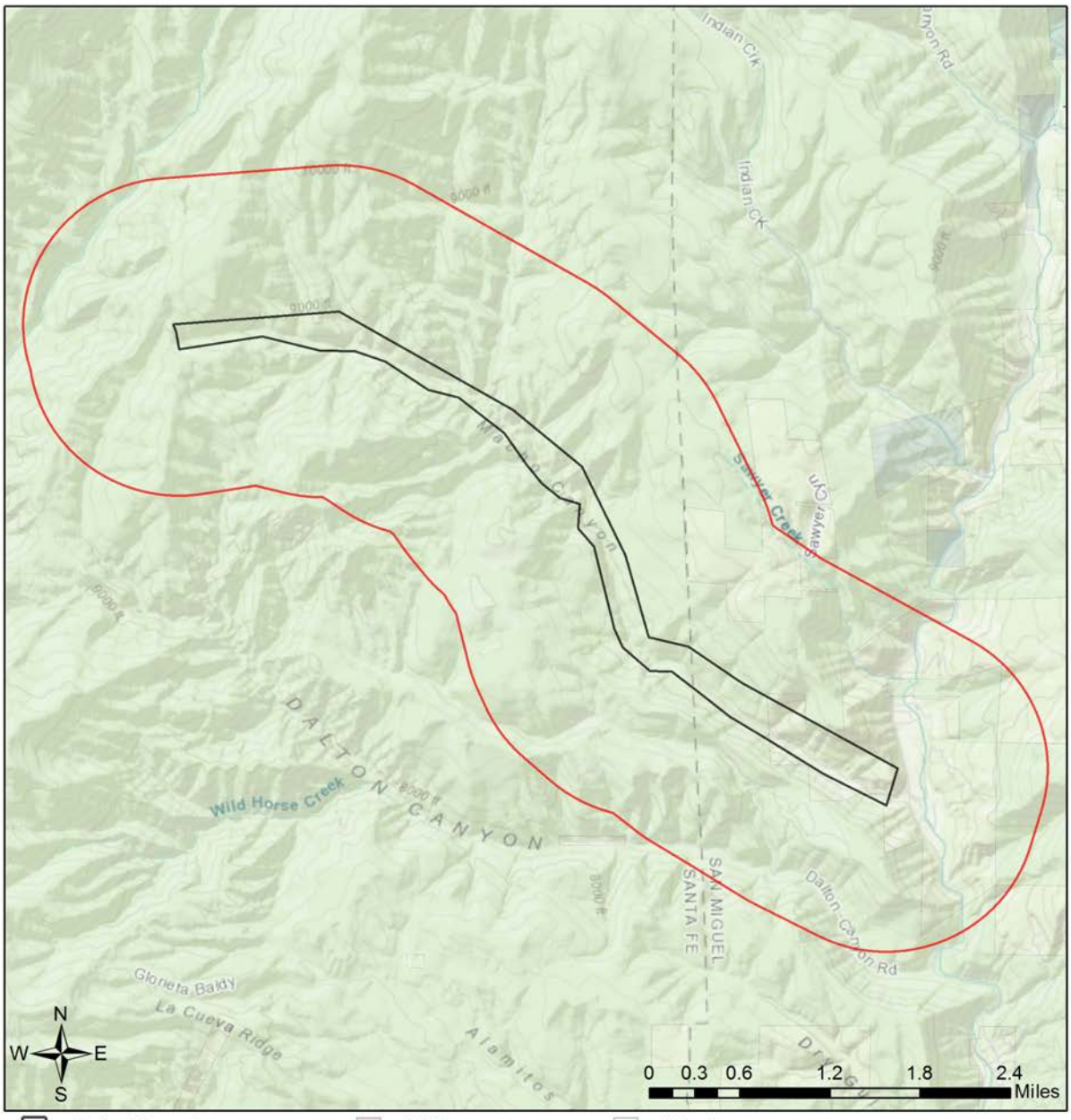
Pecos ONRW Petition - Macho Canyon Creek



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

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Military
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Tribal
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Mountain Lily	Lilium philadelphicum var. andinum			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Rio Mora
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.785436 / -105.647393
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

OVERALL STATUS

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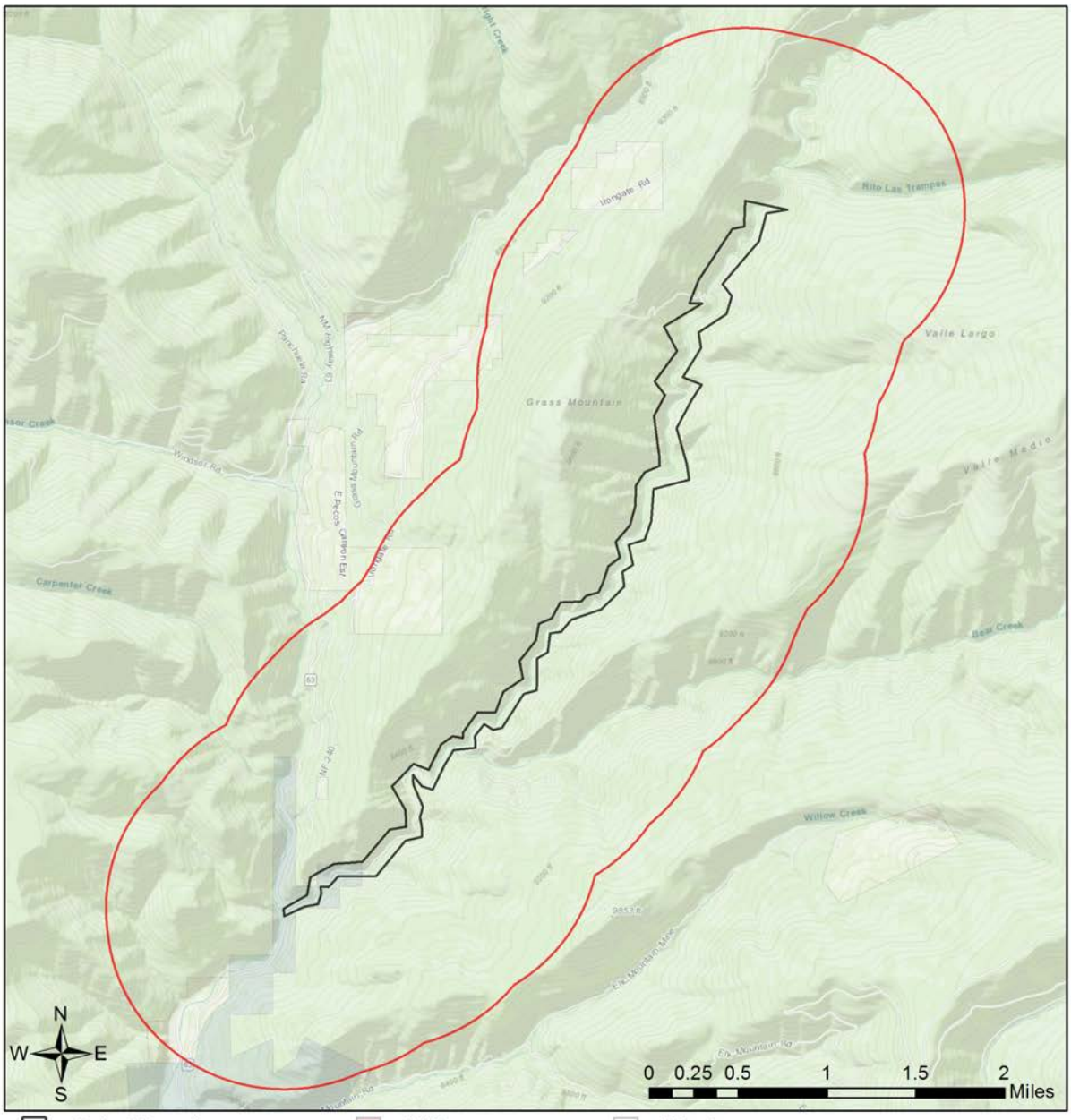
Pecos ONRW Petition - Rio Mora



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

Bureau of Land Management
Bureau of Reclamation
US Dept. of Agriculture
Military
Dept. of Energy
US Forest Service
Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

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Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Brown Trout	Salmo trutta			SERI
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Sapello Canyon Larkspur	Delphinium sapellonis			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Panchuela Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.829037 / -105.662173
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. . .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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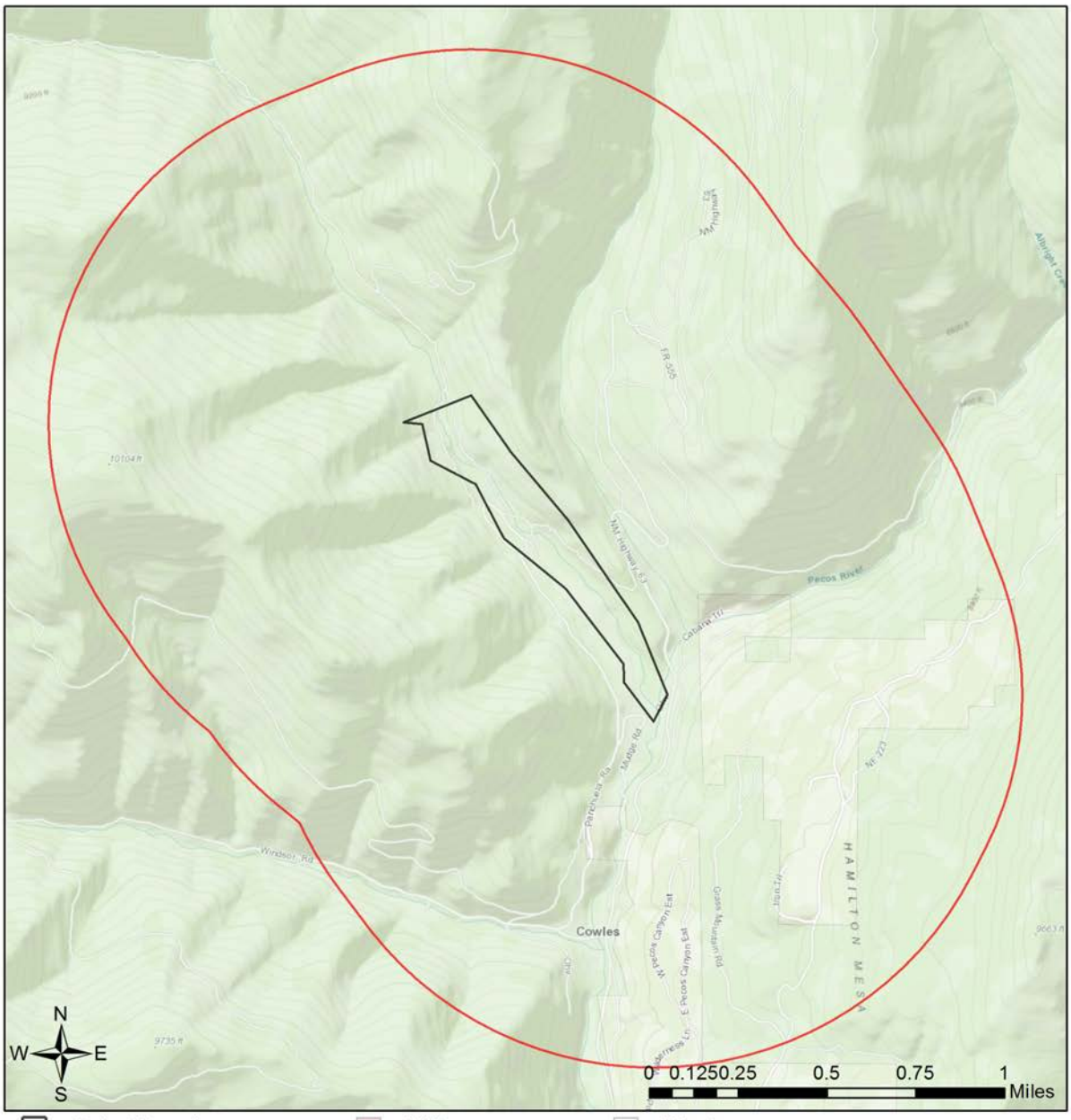
Pecos ONRW Petition - Panchuela Creek



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Northern Goshawk	Accipiter gentilis			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
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Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Cutthroat Trout	Oncorhynchus clarkii			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SERI
Rainbow Trout	Oncorhynchus mykiss			SERI
Brown Trout	Salmo trutta			SERI
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Sapello Canyon Larkspur	Delphinium sapellonis			
Mountain Lily	Lilium philadelphicum var. andinum			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Pecos Rive
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.774509 / -105.667759
County(s):	SAN MIGUEL
Project Description:	Species list request for NORW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
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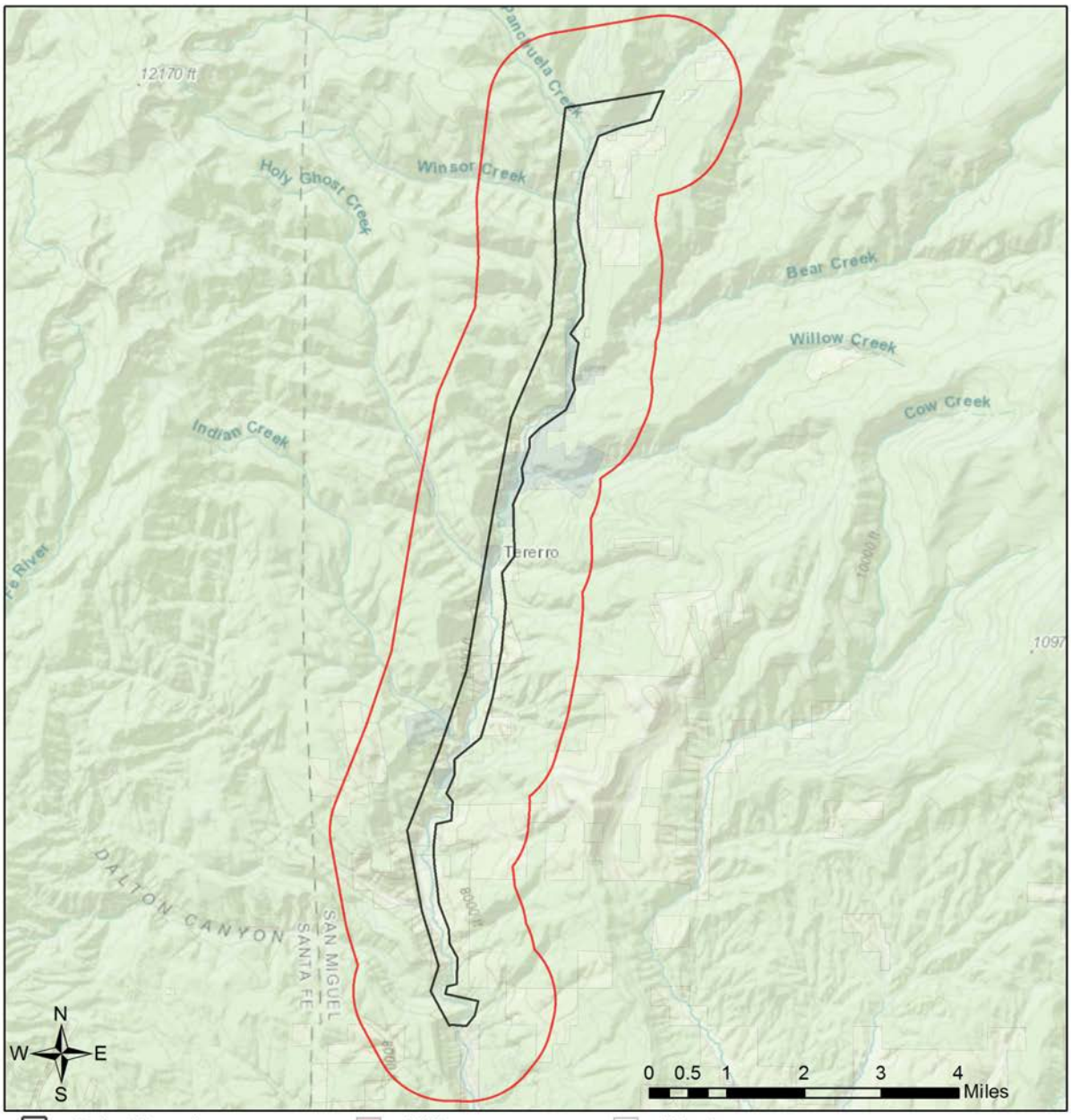

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Buffered Project Boundary

NM_SurfaceOwnership_2016

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- Military
- Dept. of Energy
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- Tribal
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- Private
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Northern Goshawk	Accipiter gentilis			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Long-Billed Curlew	Numenius americanus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida			SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
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Brown Trout	Salmo trutta			SERI
White Sucker	Catostomus commersonii			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
A Cave Obligate Springtail	Tomocerus grahami			SGCN
Black Bear	Ursus americanus			SERI
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Elk	Cervus canadensis nelsoni			SERI
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Sapello Canyon Larkspur	Delphinium sapellonis			
Mountain Lily	Lilium philadelphicum var. andinum			
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Your project occurs within important habitats for wildlife, which could include fawning/calving or wintering areas for species such as deer and elk, or high wildlife movement and activity areas. Management recommendations within these areas may include the following.

- Restrictions on noise-generating activities between Dec. 1 and Apr. 15. These activities would include oil and gas well pad development and operation that exposes wildlife to noises loud noises (at or above 48.6 dB(A) Leq at 400 feet in any direction from the source) from drilling, compressors, and pumping stations.
- Modifying fences along high use areas to make them wildlife friendly and facilitate large animal movement.
- Taking mitigation actions to reduce wildlife-vehicle collisions at high risk locations.

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Your proposed project occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, your project should consider measures to avoid the following.

- Altering surface or groundwater flow or hydrology,
- Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation.
- Affecting local surface or groundwater quality.
- Creating disturbance to wildlife utilizing these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities.

Department biologists are available for site-specific consultation regarding measures to assist with management and conservation of these habitat resources.

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Contact Name:	Rachel Conn
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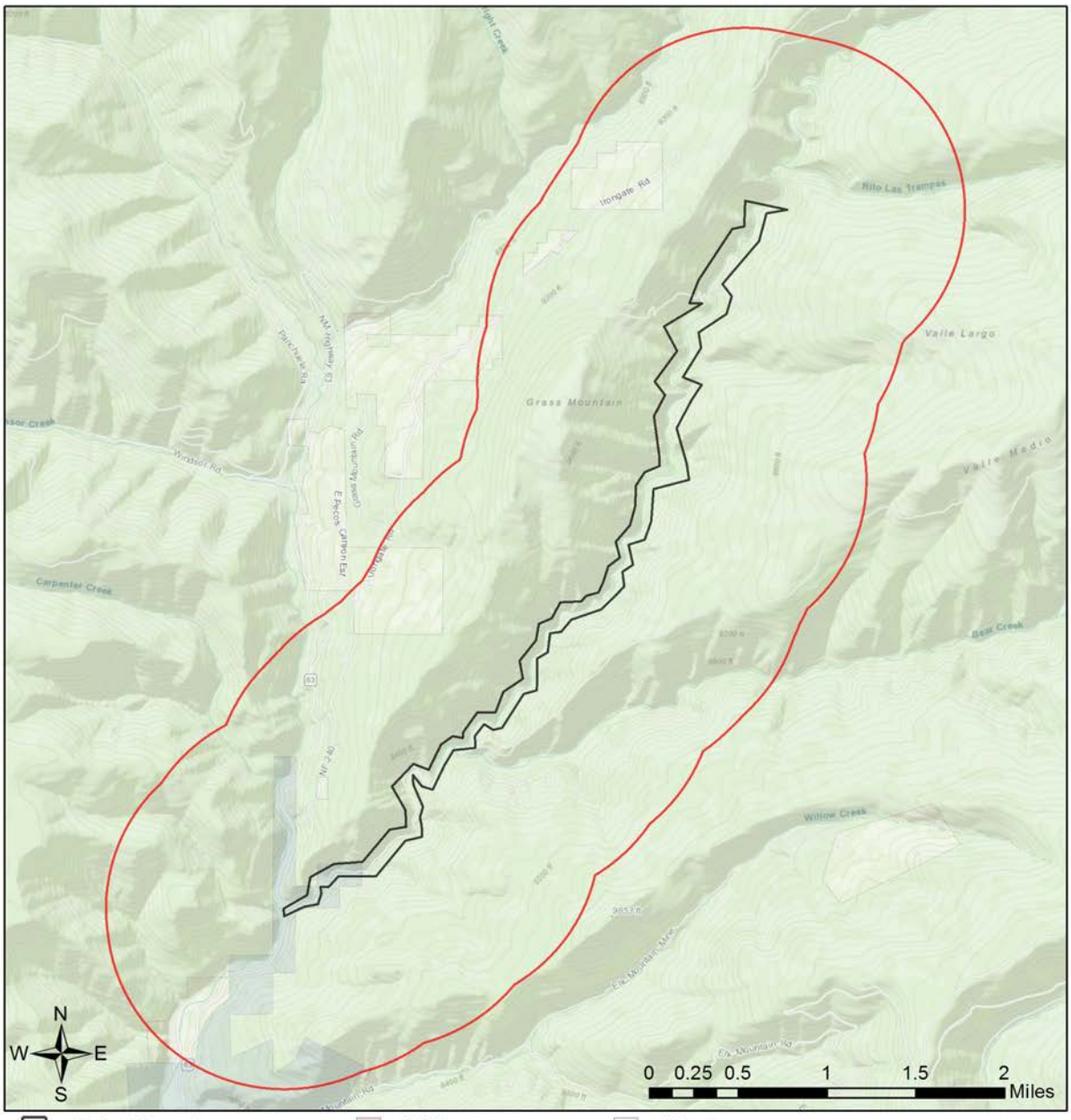
Pecos ONRW Petition - Rio Mora



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NM Game & Fish Dept.
State Park

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Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Brown Trout	Salmo trutta			SERI
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Sapello Canyon Larkspur	Delphinium sapellonis			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Sawyer Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.698410 / -105.704638
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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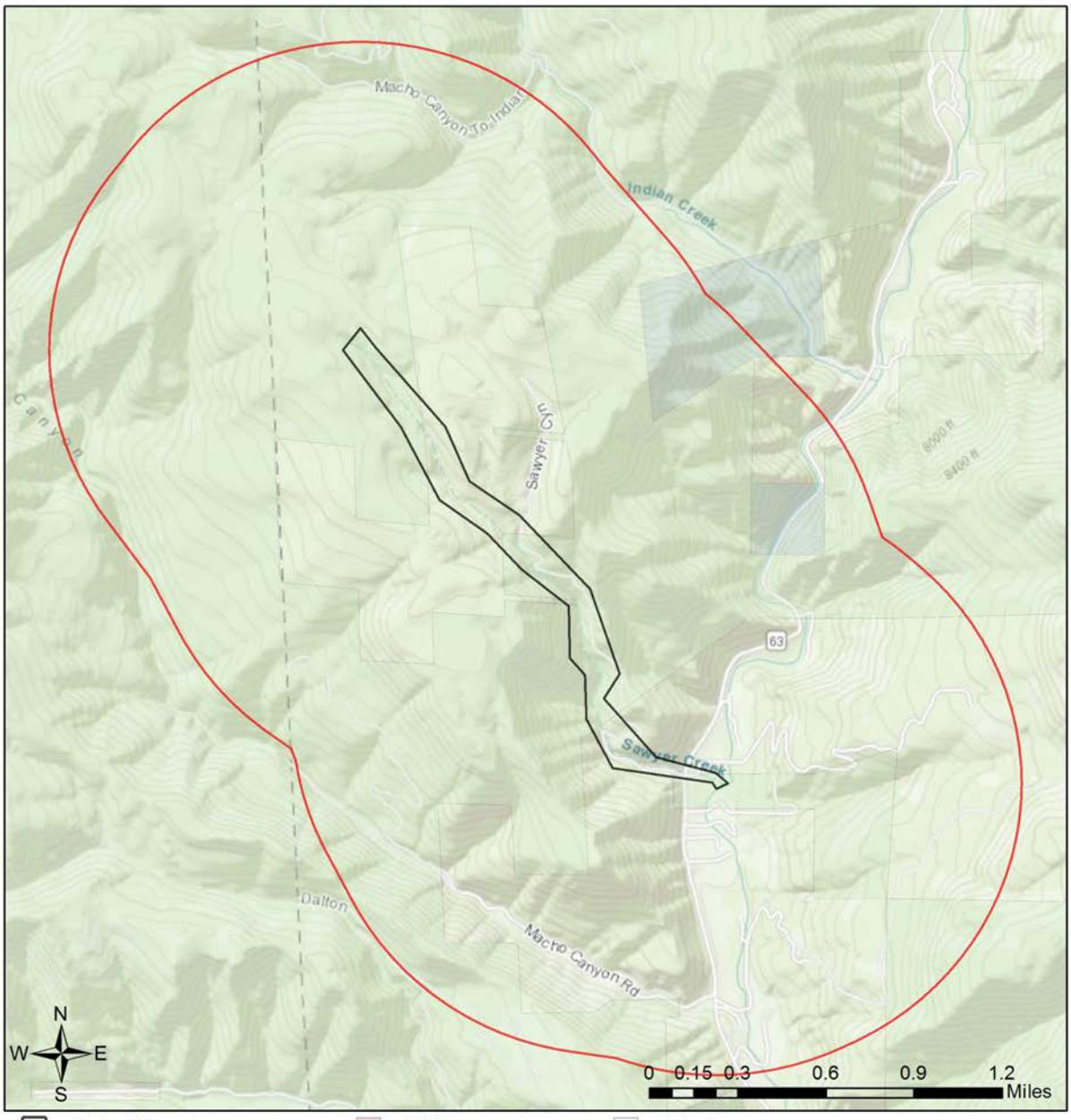
Pecos ONRW Petition - Sawyer Creek



Project Boundary
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NM_SurfaceOwnership_2016

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PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Wild Horse Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.672373 / -105.775507
County(s):	SANTA FE
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

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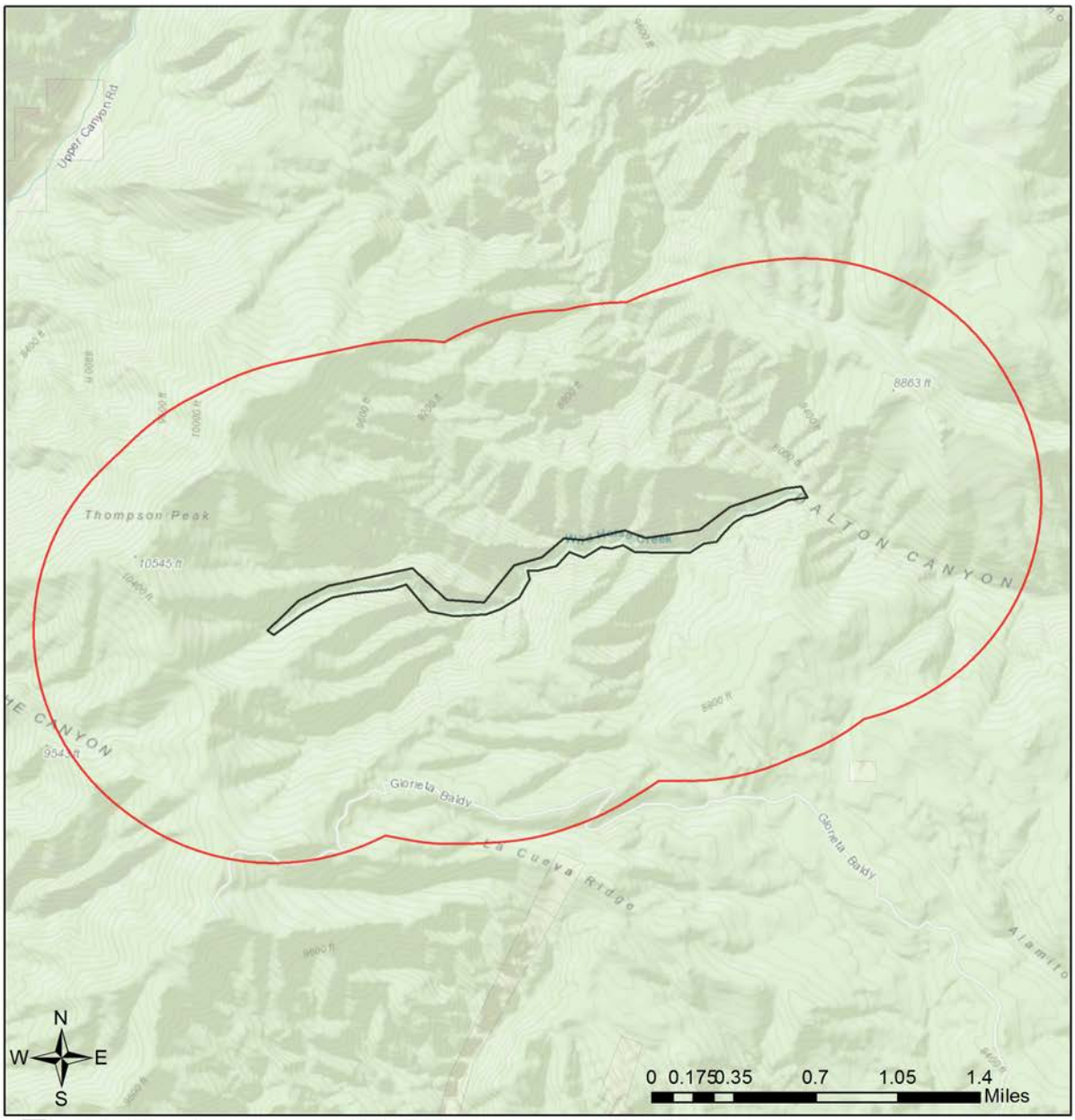

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NM_SurfaceOwnership_2016

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Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.761680 / -105.649466
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

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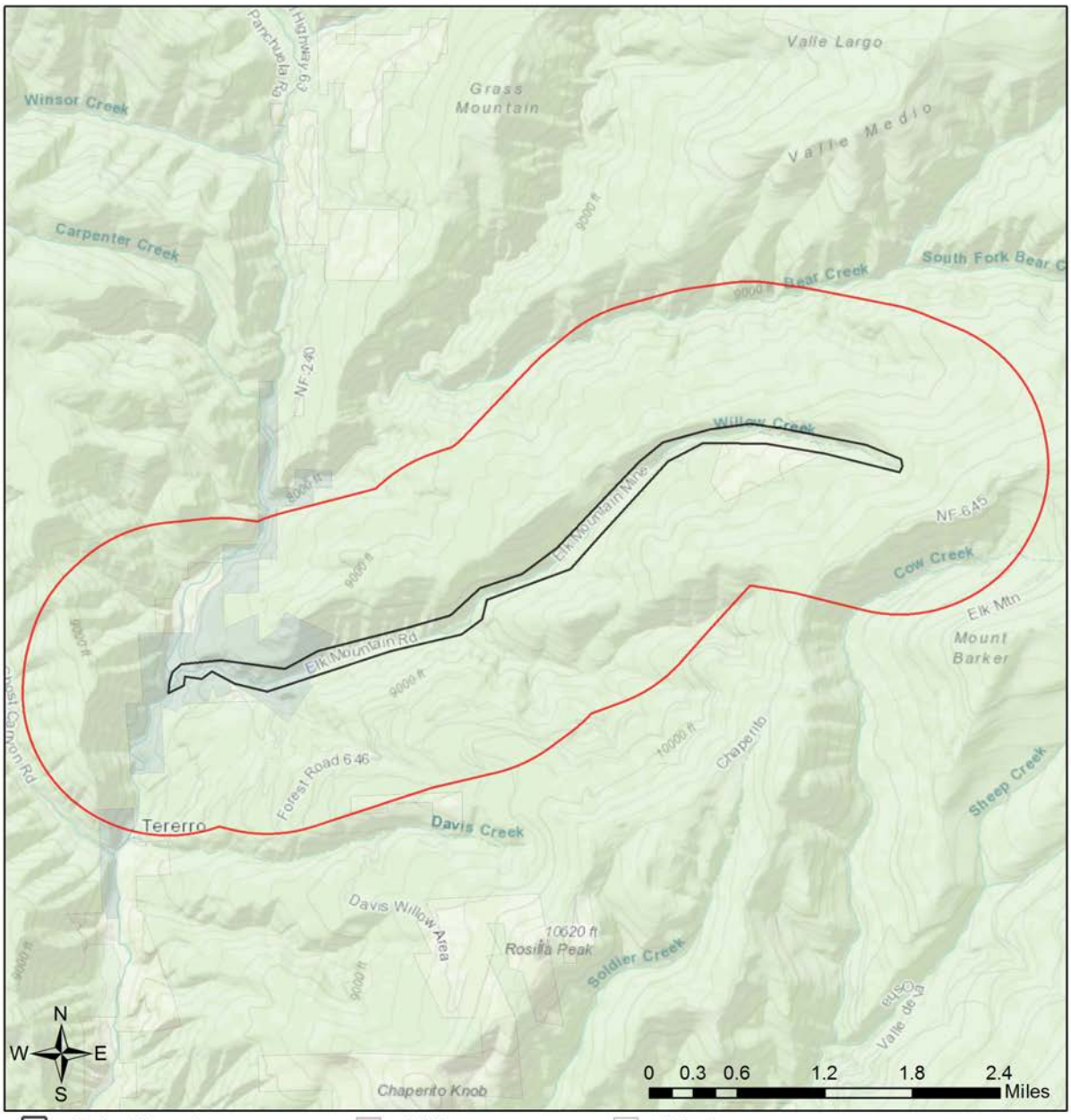

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- The Department has no authority for management of plants or Important Plant Areas. The New Mexico Endangered Plant Program, under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

PROJECT INFORMATION

Project Title:	Pecos ONRW Petition - Winsor Creek
Project Type:	WATER QUALITY
Latitude/Longitude (DMS):	35.814988 / -105.675539
County(s):	SAN MIGUEL
Project Description:	Species list request for ONRW petition. .

REQUESTOR INFORMATION

Project Organization:	NGO CONSERVATION ORGANIZATION
Contact Name:	Rachel Conn
Email Address:	rconn@amigosbravos.org
Organization:	Amigos Bravos
Address:	One Wildlife Way, Santa Fe NM 87144
Phone:	5054788160

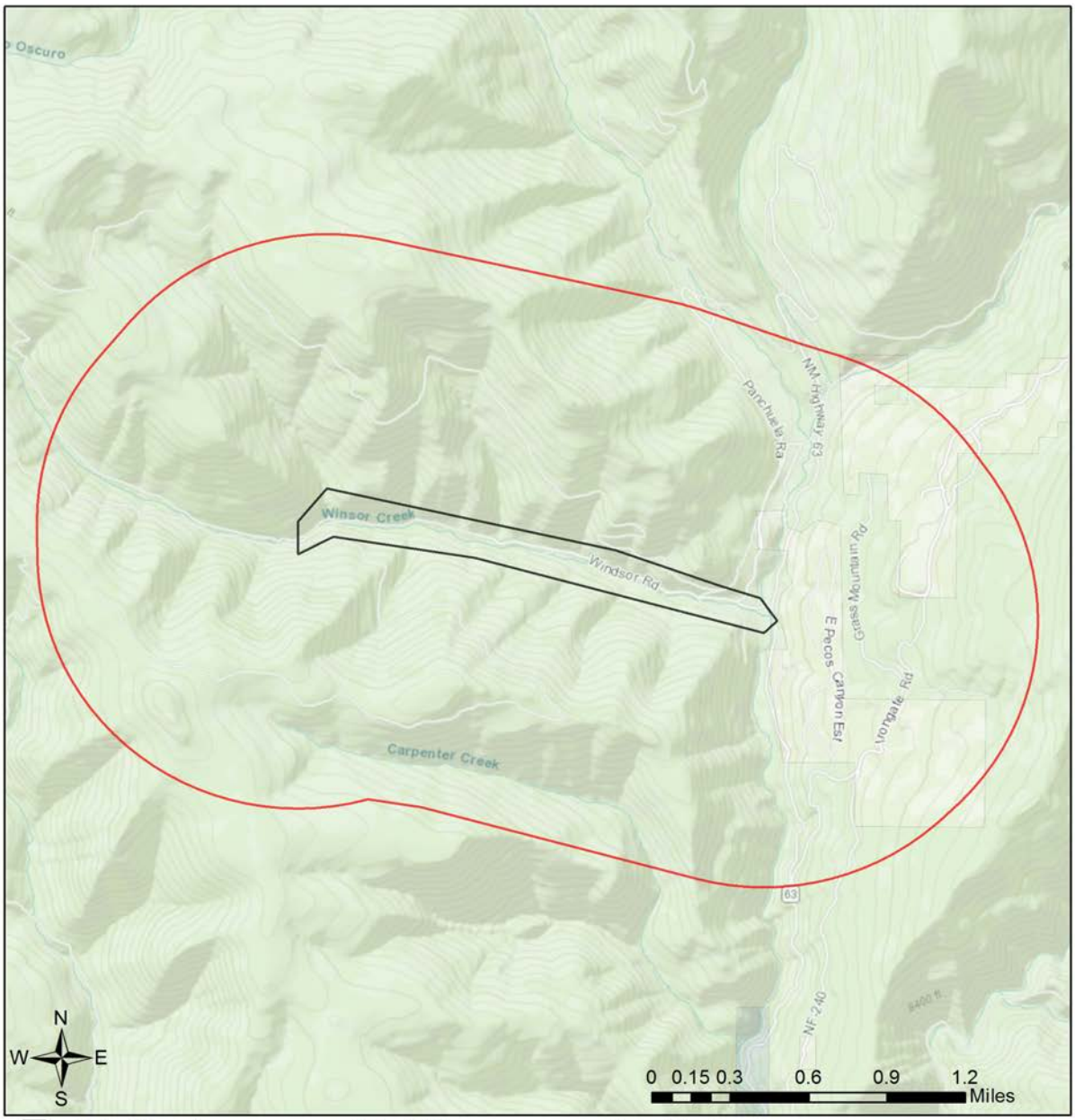
OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. You should be notified within 30 days whether there are further recommendations regarding this project proposal.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their Information for Planning and Consultation tool.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species distribution models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report can not guarantee species presence or absence at a precise point location, as might be indicated through comprehensive biological surveys. Specific questions regarding the potential for adverse impacts to vulnerable wildlife populations or habitats, especially in areas with a limited history of biological surveys, may require further on-site assessments.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to asses impacts once project details are developed. The New Mexico Crucial Habitat Assessment Tool is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

Pecos ONRW Petition - Winsor Creek



Project Boundary
Buffered Project Boundary

NM_SurfaceOwnership_2016

Bureau of Land Management
Bureau of Reclamation
US Dept. of Agriculture
Military
Dept. of Energy
US Forest Service
Wildlife Area/Refuge
Tribal
National Park/Mon.
Private
State Land Office
NM Game & Fish Dept.
State Park

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Cutthroat Trout	Oncorhynchus clarkii			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SERI
Rainbow Trout	Oncorhynchus mykiss			SERI
Brown Trout	Salmo trutta			SERI
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Elk	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
New Mexico Stickseed	Hackelia hirsuta			
Holy Ghost Ipomopsis	Ipomopsis sancti-spiritus			
Sapello Canyon Larkspur	Delphinium sapellonis			
Mountain Lily	Lilium philadelphicum var. andinum			
Yellow Lady's-Slipper	Cypripedium parviflorum var. pubescens			
Hooded Ladies'-Tresses	Spiranthes romanzoffiana			

NMAC = New Mexico Administrative Code, NMRPCS = New Mexico Rare Plant Conservation Strategy, SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

Your proposed project activities may require a custom review for assessment of potential effects to wildlife. If the information provided under the "OVERALL STATUS" section above indicates that your project will be forwarded for review, a Department biologist will confirm whether any additional conservation measures are needed. You should expect to receive any additional project recommendations within 30 days of your project submission. If the "OVERALL STATUS" section indicates that no further consultation with the Department is required, you should not expect to receive additional project feedback from the Department, and you may proceed with project planning as indicated.

The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint should avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area. If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to the Department's habitat handbook guideline for Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems.

Disclaimers regarding recommendations:

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The New Mexico Endangered Plant Program, under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

Appendix E: New Mexico State Endangered Plant Species

NEW MEXICO STATE ENDANGERED PLANT SPECIES (19.21.2.8 NMAC)

Detailed information and images of many of these and other rare plants can be found at the New Mexico Rare Plants website (https://nmrareplants.unm.edu/). Also, click on botanical name in table to get detailed information for each species from New Mexico Rare Plants Website.

Botanical Name	Common Name	New Mexico Counties
Agalins calycina	Leoncita false-foxglove	Chaves
Aliciella formosa	Aztec gilia	San Juan
Allium gooddingii	Goodding's onion	San Juan, McKinley, Catron, Lincoln, Santa Fe
Amsonia tharpii	Tharp's bluestar	Eddy
Argemone pinnatisecta	Sacramento prickly poppy	Otero
Astragalus humillimus	Mancos milkvetch	San Juan
Castilleja ornata	Swale paintbrush	Hidalgo
Castilleja tomentosa	Tomentose paintbrush	Hidalgo
Cirsium vinaceum	Sacramento Mountains thistle	Otero
Cirsium wrightii	Wright's marsh thistle	Chaves, Grant, Guadalupe, Otero, Sierra, Socorro
Cleome multicaulis (Peritoma multicaulis)	slender spiderflower	Grant, Hidalgo
Coryphantha robustispina ssp. scheeri	Scheer's pincushion cactus	Chavez, Eddy
Cylindropuntia viridiflora	Santa Fe cholla	Santa Fe
Cymopterus spellenbergii	Spellenberg's springparsley	Rio Arriba, Taos
Cypripedium parviflorum var. pubescens	golden lady's slipper	San Juan, Grant, San Miguel
Echinocereus fendleri var. kuenzleri	Kuenzler's hedgehog cactus	Chavez, Eddy, Lincoln, Otero
Erigeron hessii	Hess' fleabane	Catron
Erigeron rhizomatus	Zuni fleabane	Catron, McKinley, San Juan
Eriogonum gypsophilum	gypsum wild buckwheat	Eddy

Escobaria duncanii	Duncan's pincushion cactus	Sierra
Escobaria organensis	Organ Mountain pincushion cactus	Doña Ana
Escobaria sneedii var. leei	Lee's pincushion cactus	Eddy
Escobaria sneedii var. sneedii	Sneed's pincushion cactus	Doña Ana
Escobaria villardii	Villard's pincushion cactus	Doña Ana, Otero
Hedeoma todsenii	Todsen's pennyroyal	Otero, Sierra
Helianthus paradoxus	Pecos sunflower	Cibola, Valencia, Socorro, Guadalupe, Chavez
Hexalectris colemanii	Coleman’s coralroot	Hidalgo
Hexalectris nitida	shining coralroot	Eddy, Otero
Hexalectris arizonica	crested coralroot	Sierra, Otero, Hidalgo
Ipomopsis sancti-spiritus	Holy Ghost ipomopsis	San Miguel
Lepidospartum burgessii	gypsum scalebroom	Otero
Lilium philadelphicum	wood lily	Otero, Los Alamos, Sandoval, San Miguel, Santa Fe
Linum allredii	Allred’s flax	Eddy
Opuntia arenaria	sand prickly pear	Doña Ana, Luna, Socorro
Pediocactus knowltonii	Knowlton's cactus	San Juan
Pediomelum pentaphyllum	Chihuahua scurfpea	Hidalgo
Peniocereus greggii	night-blooming cereus	Doña Ana, Grant, Hidalgo, Luna
Penstemon metcalfei	Metcalfe’s beardtongue	Sierra
Polygala rimulicola var. mescalerorum	San Andres milkwort	Doña Ana
Puccinellia parishii	Parish's alkali grass	Catron, Cibola, Grant, Hidalgo, McKinley, Sandoval, San Juan
Sclerocactus cloverae	Clover’s cactus	Rio Arriba, San Juan, Sandoval

Sclerocactus mesae-verdae	Mesa Verde cactus	San Juan
Scophularia macrantha	Mimbres figwort	Grant, Luna
Spiranthes magnicamporum	lady tresses orchid	Bernalillo, Santa Fe, Guadalupe, Rio Arriba
Townsendia gypsophila	gypsum Townsend's aster	Sandoval

PETITIONERS' EXHIBIT

3

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY GAYLE KILLAM

I. INTRODUCTION AND QUALIFICATIONS

I am Gayle Killam, Principal at Water Policy Pathways, LLC. I have had the honor of working on Clean Water Act implementation in dozens of states across the country over the last twenty-five years. I have worked extensively with state, federal and tribal government agencies on the details of their regulations, programs, permits and implementing procedures.

My work has included years of analyzing state water quality programs, comparing and contrasting state programs, compiling information about multi-state basins, and training individuals and organizations about federal, state and local water quality programs, regulations, and permits. This has included working with tribal governments, acequias and non-profit organizations in New Mexico. I have spent a considerable amount of time focused on antidegradation programs – from the federal requirements to state implementation. In fact, I previously testified before the Water Quality Control Commission ("Commission") during the hearing on Amigos Bravos' petition to establish a process for nomination and protection of Outstanding National Resource Waters ("ONRWs" or "Outstanding Waters") in the early 2000s.

Until early 2020, I was employed by River Network, a national non-profit organization focused on connecting people and organizations involved in the work of watershed protection and amplifying the tools, strategies, and lessons learned. Over the years, I initiated and oversaw the compilation of water quality standards and antidegradation information from every state in the country, an online Clean Water Act course, and two versions of River Network's Clean Water Act Owner's Manual. My complete resume is attached as Exhibit 4.

I am before you to explain how the Petition from San Miguel County, the Village of Pecos, the New Mexico Acequia Association, Molino de la Isla Organics LLC, and the Upper Pecos Watershed Association to nominate the waters of the Upper Pecos Watershed as Outstanding National Resource Waters meets the Commission's criteria for such a designation. Specifically, my testimony addresses section 20.6.4.9.B NMAC, demonstrating that designation of the waters of the Upper Pecos Watershed as ONRWs will benefit the State of New Mexico and that the nominated waters meet one or more of the criteria for designation provided in sections 20.6.4.9.B(1) – (3) NMAC.

II. OUTSTANDING NATIONAL RESOURCE WATERS CONTEXT

The Clean Water Act requires states and allows tribal governments to develop water quality standards that consist of three components: establishing the uses of waters, identification of pollutants and conditions that must be measured to protect those uses (and at what levels), and development of procedures to prevent degradation of the current quality of the waters.[1] In order to prevent degradation, each state or tribe is required to develop and implement an antidegradation policy and implementing procedures. The establishment of uses and

[1] 40 CFR §131, Subpart B.

development of water quality criteria are important to the establishment of an effective antidegradation policy.

a. Designated Uses and Antidegradation Policy

The regulations implementing the Clean Water Act instruct states and tribes to specify the uses to be achieved and protected in each water body.[2] These uses do not need to be currently attained;[3] they can be aspirational. All existing uses (those attained since November 28,1975)[4] must be fully protected by the standards if they have not been designated. Understanding existing uses is important to understanding antidegradation because the basic protection that the Antidegradation Policy provides, is absolute protection of existing uses. This is known as Tier I of the antidegradation policy.[5]

b. Water Quality Criteria and Antidegradation Policy

In tandem with designation of uses, states and tribes must develop water quality criteria that will ensure that even the most sensitive uses are supported.[6] Water quality criteria are important in defining the section of the antidegradation policy that protects "high quality waters," otherwise known as Tier II. This protection is directed toward all waters that in any way exceed the basic quality necessary to support aquatic life and recreation,[7] and is triggered when potential threats to that "high quality" are proposed through permits or administrative actions.

c. Antidegradation Policy and Implementation

[2] 40 CFR §131.10(a).
[3] 40 CFR §131.3(f).
[4] 40 CFR §131.3(e).
[5] 40 CFR §131.12(a)(1).
[6] 40 CFR §131.11(a).
[7] 40 CFR §131.12(a)(2).

The antidegradation policy is the third component of all state and tribal water quality standards. It was established to fulfil one-half of the core objective of the Clean Water Act "… to restore and **maintain** the physical, chemical and biological integrity of the Nation's waters."[8]

The antidegradation policy must have three components. As mentioned, two of the three components of antidegradation are about (1) ensuring protection of existing uses of all waters and (2) guarding against threats to existing high water quality. The first is usually accomplished through a thorough designation of uses and development of strong water quality criteria. The second is intended to be accomplished through a process of evaluating alternatives to potential threats.

The third component of the antidegradation policy is the focus of the Upper Pecos Watershed petition. This component was established to maintain and protect the quality of waters exhibiting exceptional recreational or ecological significance.[9] This is known as Tier III, and the waters are typically called Outstanding National Resource Waters ("ONRWs" or "Outstanding Waters"). Across the country, Tier III protection is established and implemented in many different ways, but most commonly, the process involves nomination and designation of water bodies. This designation process is essential to the protection and maintenance of the water quality that defines waters such as the Upper Pecos Watershed to ensure sensitive species, rare habitat, and unique recreational opportunities are supported. I will explain how these outstanding waters meet the criteria for Outstanding Waters as established in New Mexico's regulations.

[8] 33 U.S.C. § 1251(a) (emphasis added).
[9] 40 CFR §131.12(a)(3).

III. NEW MEXICO APPROACH TO OUTSTANDING WATERS

In section 20.6.4.9 NMAC, New Mexico has codified procedures for nominating an ONRW and criteria for designating ONRWs. To 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.

Once designated, no degradation of water quality is allowed in those waters. The regulations in 20.6.4.8.A(3) NMAC detail public review and comment period, limits of temporary and short-term degradation "necessary to accommodate public health or safety activities," requirements of minimization of degradation, protection of the "essential character or special use," and appropriate communication and oversight during emergency response action. New Mexico created allowances for particular land uses and activities in ONRWs.

This designation process **does not halt** preexisting activities such as grazing that are allowed by federal or state law and are controlled by best management practices, as long as no new or increased discharges result after the ONRW designation, and **does not impose** new requirements on acequia operations:

> **(d)** Preexisting land-use activities, including grazing, allowed by federal or state law prior to designation as an ONRW, and controlled by best management practices (BMPs), shall be allowed to continue so long as there are no new or increased discharges resulting from the activity after designation of the ONRW.
> **(e)** Acequia operation, maintenance, and repairs are not subject to new requirements because of ONRW designation. However, the use of BMPs to minimize or eliminate the introduction of pollutants into receiving waters is strongly encouraged. [10]

[10] 20.6.4.8.A(3)(d), (e) NMAC.

In addition, short term degradation associated with activities that are necessary to accommodate public health and safety actions, such as bridge or sewer line repairs, as well as emergency response actions, such as firefighting activities, **are allowed** with appropriate review, oversight, and time limitations.

> **(c)** Where an emergency response action that may result in temporary and short-term degradation to an ONRW is necessary to mitigate an immediate threat to public health or safety, the emergency response action may proceed prior to providing notification required by Subparagraph (a) of this paragraph in accordance with the following:
> **(i)** only actions that mitigate an immediate threat to public health or safety may be undertaken pursuant to this provision; non-emergency portions of the action shall comply with the requirements of Subparagraph (a) of this paragraph;
> **(ii)** the discharger shall make best efforts to comply with requirements (i) through (iv) of Subparagraph (a) of this paragraph;
> **(iii)** the discharger shall notify the department of the emergency response action in writing within seven days of initiation of the action;
> **(iv)** within 30 days of initiation of the emergency response action, the discharger shall provide a summary of the action taken, including all actions taken to comply with requirements (i) through (iv) of Subparagraph (a) of this paragraph. [11]

Restoration and maintenance activities that may result in temporary degradation **are also allowed** within designated ONRWs with appropriate review, oversight, time limitations, minimization of impacts, and protections of existing uses and "essential character" of the ONRW:

> **(4)** This antidegradation policy does not prohibit activities that may result in degradation in surface waters of the state when such activities will result in restoration or maintenance of the chemical, physical or biological integrity of the water. [12]

[11] 20.6.4.8.A(3)(a) (c) NMAC.
[12] 20.6.4.8.A.(4)(a) NMAC.

IV. REQUIREMENTS AND CRITERIA FOR ONRW NOMINATION

The requirements for nominating an ONRW are contained in section 20.6.4.9 NMAC as follows:

> A. Procedures for nominating an ONRW: Any person may nominate a surface water of the state for designation as an ONRW by filing a petition with the commission pursuant to the guidelines for water quality control commission regulation hearings. A petition to designate a surface water of the state as an ONRW shall include:
> (1) a map of the surface water of the state, including the location and proposed upstream and downstream boundaries;
> (2) 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 criteria listed in Subsection B;
> (3) water quality data including chemical, physical or biological parameters, if available, to establish a baseline condition for the proposed ONRW;
> (4) a discussion of activities that might contribute to the reduction of water quality in the proposed ONRW;
> (5) any additional evidence to substantiate such a designation, including an analysis 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; and
> (6) affidavit of publication of notice of the petition in a newspaper of general circulation in the affected counties and in a newspaper of general statewide circulation.
>
> B. Criteria for ONRWs: 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 a state special trout water, 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 and contact uses and the human health-organism only criteria, and the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource.

20.6.4.9 NMAC (emphasis added).

V. APPLYING PROTECTIONS AT THE WATERSHED SCALE

The Petitioners propose a comprehensive designation of all waters within the Upper Pecos Watershed to best protect the watershed, and therefore nominate all waters, whether named or unnamed, and all perennial, intermittent, and ephemeral surface waters, including rivers, streams, tributaries, lakes, and wetlands within the watershed boundaries represented in Map 1 and Map 2 of the Petition. These boundaries encompass the mainstem of the Pecos River from the U.S. Forest Service Dalton Fishing/Day Use area upstream to the boundary of the Pecos Wilderness, fifteen named tributaries (Table 3 of the Petition) from their confluence with the Pecos River upstream to their headwaters or to the Pecos Wilderness boundary (whichever comes first), and unnamed streams and wetlands that are part of the watershed as a whole.

Designating 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. All of these waters, taken together, form a unique and important ecosystem that supports significant recreational opportunities in New Mexico. The individual, diverse characteristics of each surface water that comprises this nomination do not exist in a vacuum, isolated from each other, but rather are dependent on each other. The waters combine to form a watershed that provides valuable ecological functions, high quality habitat to threatened, endangered and "Special Status" species, and significant recreational and economic resources to the local communities within the watershed and to the State as a whole. Put simply, the whole of the Upper Pecos Watershed is greater than the sum of its individual surface water segments.

a. Consistency and Management Efficiency

An inclusive approach to designating ONRW waters within a certain region or regions is not novel for the Commission. 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,[13,14] 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 wilderness areas in New Mexico.[15]

The Upper Pecos Watershed nomination follows a similar approach, seeking to protect the integrity of the entire system and to preserve the ecological, recreational, and economic significance of the bioregion as a whole through this ONRW designation. With 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 wilderness ONRW designation of the Upper Pecos headwaters.[16] Consistent protections and requirements within the region will likely result in a greater understanding of measures to be undertaken and better compliance.

b. Scientific Basis

The ecological connection between upstream and downstream functions and impacts within a watershed justifies the Petitioners' proposal to protect all waters of the Upper Pecos Watershed as an integrated, complete system managed under consistently applied ONRW

[13] New Mexico Environment Department, New Mexico Department of Game and Fish, and New Mexico Energy and Natural Resources, Valle Vidal Petition, pp. 2, 4, (August 2005).
[14] 20.6.4.9.D(2) NMAC, Order and Statement of Reasons, No. WQCC No. 05-04(R) (Dec. 14, 2005)
[15] 20.6.4.9.D(3) NMAC.
[16] 20.6.4.9.D(3) NMAC.

standards.[17] As explained by J. David Allen and Maria M. Castillo in their seminal text on stream ecology: "Certain processes and properties emerge at the level of the whole ecosystem, including the flow of energy through food webs, the cycling of carbon and nutrients such as nitrogen and phosphorus, and the origin, processing, and transport of materials from headwaters to sea."[18] They explain how principals of fluvial systems are manifested on three planes of influence in the watershed: (1) longitudinally (high to low gradient); (2) laterally (use of the floodplain); and (3) vertically (between groundwater and surface water).[19] A watershed-scale ONRW designation, such as that which is nominated here, addresses all of these planes of influence.

The U.S. Environmental Protection Agency ("EPA") in 2009 determined that:

> Watersheds are gradually being regarded as the most appropriate spatial unit for land management, and especially for water-resource management. Managing from a watershed context is more effective than focusing on a specific site, such as an individual ephemeral or intermittent stream segment, because actions by humans, wildlife, and nature can have widespread effects, crossing political boundaries and impacting downstream water quality and ecosystem health. The accumulation of impacts over large areas in the rapidly developing southwest suggests a landscape or watershed-scale approach that considers the cumulative effects on overall watershed function.[20]

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[17] *See* Robert W. Adler, Addressing Barriers to Watershed Protection, 25 Envtl. L. 973 at 981 (1995) (explaining that "actions and decisions affecting the headwaters of a watershed cannot be divorced from impacts downstream (and vice versa)" … and that "water bodies cannot be viewed simply as the water within the banks of a river or the shores of a lake, but are connected ecologically to the immediate floodplain and riparian ecosystem and to natural or artificial land conditions further upland" (internal citation omitted)); *see also id.* ("According to the Natural Research Council Restoration Committee, '[l]akes, streams, rivers, ponds, ground water, estuaries, and wetlands are interconnected parts of larger landscapes,' and restoration programs must be coordinated on a regional or watershed scale. The Committee emphasized the need to restore aquatic ecosystem structure and function on a watershed or ecosystem basis and not simply to address symptoms of harm through isolated projects." (internal citations omitted)).

[18] J. David Allan & Maria M. Casttillo, STREAM ECOLOGY, STRUCTURE AND FUNCTION OF RUNNING WATERS, SECOND EDITION (2007).

[19] *Id.*

[20] U.S. Environmental Protection Agency, The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest at 7 (Nov. 2009) *available at* https://www.epa.gov/sites/production/files/2015-03/documents/ephemeral_streams_report_final_508-kepner.pdf.

EPA and others have shown that the clear link between hydrology and water quality "demonstrates the importance of protecting the entire watershed" when considering protections.[21]

The essential ecosystem functions and services of watersheds are numerous and include: nutrient cycling, carbon storage, erosion and sediment control, increased biodiversity, soil formation, wildlife corridors, water storage and filtration, flood control, food, timber, forage, recreation, and reduced vulnerability to the effects of climate change.[22] By designating the Upper Pecos Watershed as an ONRW, the antidegradation protections that the designation provides will protect the functions of the entire watershed, as well as its unique, individual parts and will set the stage for activities that restore or maintain water quality into the future.[23]

Because a healthy watershed depends on all of its hydrologic components, the inclusion and protection of ephemeral and intermittent streams (named and unnamed) preserves the integrity of the watershed. In New Mexico, 88% of the state's streams are either ephemeral or intermittent.[24] The flows and floods from those ephemeral and intermittent streams play a major role in shaping the dynamic hydrology of New Mexico's relatively few perennial reaches,[25] and the Pecos River is no exception. EPA has found that ephemeral and intermittent streams provide the same ecological and hydrological functions as perennial streams by moving water, nutrients,

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[21] *Id.* at 8.
[22] Laura Dlugolecki, U.S. Environmental Protection Agency, Healthy Watersheds Program, Economic Benefits of Protecting Healthy Watersheds: A Literature Review (June 2012).
[23] 20.6.4.8.A(3), (4) NMAC.
[24] U.S. Environmental Protection Agency, Connectivity of Streams & Wetlands to Downstream Waters: A Review & Synthesis of the Scientific Evidence at B-37 (Jan. 2015) *available at* https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=296414.
[25] *Id.*

and sediment throughout the watershed. [26] Indeed, the sediment and nutrients transported downstream from ephemeral and intermittent streams contribute to downstream river productivity.[27] And, not to be overlooked, the riparian habitats provided by ephemeral and intermittent streams support a vast array of aquatic, wildlife, and plant species that are interdependent components of the ecosystem.[28] Periodic flows in ephemeral or intermittent tributaries can have a strong influence on the chemistry of the entire system through their role in transporting potential contaminants downstream.[29] EPA specifically calls out the importance of protecting ephemeral waters on a "landscape or watershed-scale approach".[30]

By 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.

A healthy watershed, protected as a whole, performs key functions that support indigenous sensitive species through vulnerable life stages and irregular climatic conditions. Watershed integrity has been described as the "capacity of a watershed to support and maintain the full range of ecological processes and functions essential to the sustainability of biodiversity

[26] U.S. Environmental Protection Agency 2009 at iii.
[27] U.S. Environmental Protection Agency Jan. 2015 at B-37.
[28] *Id.* at B-55.
[29] U.S. Environmental Protection Agency, Technical Support Document for the Clean Water Rule: Definition of Waters of the United States at 260 (May, 2015) *available at* https://www.epa.gov/sites/production/files/2015-05/documents/technical_support_document_for_the_clean_water_rule_1.pdf.
[30] U.S. Environmental Protection Agency 2009 at 2.

and of the watershed resources and services provided to society."[31] Just as the ecological and human uses of a watershed are inextricable, so too must be the commitment to long term sustainability of healthy watershed functions through effective, consistent, and science-based protection.

c. Community Connection

The watershed nomination is also based on the value of the Upper Pecos Watershed as a whole to the State, the exceptional recreational and ecological significance of the watershed, the presence of high quality waters across the watershed, and the historical, cultural, economic, recreational, and ecological values that are woven together by the presence of water.

The health of the Upper Pecos Watershed is inextricably tied to the community, cultural, and economic values that motivate Petitioners to seek an ONRW designation for the Upper Pecos Watershed. The Upper Pecos Watershed must be viewed from a singular, all-inclusive, and bioregional perspective. The Upper Pecos Watershed supports a long tradition of local farming and ranching, as well as a vibrant recreation economy. Petitioners' enjoyment of the rich biodiversity of the area is based upon the interconnected nature of the various streams, creeks, and rivers combining and flowing together downstream at any given time of the year. It is the collective whole that renders the Upper Pecos Watershed a truly significant place to live, work, visit, and play, thus demonstrating the immense benefit of this watershed to the State of New Mexico.

[31] J. E. Flotemersch et al., A Watershed Integrity Definition and Assessment Approach to Support Strategic Management of Watersheds, 32:7 River Research & Applications 1654–71 (2016).

VI. OUTSTANDING WATERS CRITERIA APPLIED TO THE UPPER PECOS RIVER

The Upper Pecos Watershed ONRW nomination is justified because the watershed is beneficial to the State, 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. The Pecos River meets it for two categories.

In the following pages, I will detail how the designation will benefit the State and how the nominated waters meet each of the criteria set forth in the water quality standards. It is important to note that meeting only one criterion found at 20.6.4.9.B NMAC is required for designation. This nomination of the entire Upper Pecos Watershed demonstrates that the nominated waters far exceed the minimum requirements.

a. Benefit to New Mexico

The overarching criterion of ONRW designation is that the nominated waters must be beneficial to the State of New Mexico. This criterion is met by the Upper Pecos Watershed in multiple ways.

Protecting the Upper Pecos Watershed as an ONRW has numerous benefits to the State. The Upper Pecos is the lifeblood of nearby communities and ecosystems. The Pecos River and its tributaries provide clean water to multiple acequias for irrigating farms and ranches. It draws visitors from across New Mexico and out of state to enjoy its scenic beauty and abundant outdoor recreation opportunities. Many seek solitude in the rugged forests and canyons of the surrounding Wilderness and National Forest areas. Others gather to picnic or fish at the U.S. Forest Service Dalton Fishing/Day Use area, or to camp at one of the nearby campgrounds.

Popular recreational activities range from hiking, biking, and camping to fishing, horseback riding, and more. All of these activities depend on clean water.

Lodging and other local businesses depend on the health of the Upper Pecos Watershed to attract visitors. For example, there are six lodging businesses and one store along the Pecos River (from Windy Bridge to Cowles) that depend on the recreating public. The Pecos Business Association, a New Mexico non-profit business league, also relies on healthy waters to attract visitors. Annually, recreation brings millions of dollars to the area surrounding the nominated waters (and to the State of New Mexico). In 2013, anglers alone spent almost $29 million towards fishing in San Miguel County, second only to Bernalillo County.[32] Hunters spent over $18 million. That same year, anglers with fishing destinations in San Miguel County contributed substantially to the state economy by providing 333 jobs, $11.7 million in labor income, $20.5 million to the state gross domestic product ("GDP"), and $2.3 million in state and local tax revenue.[33] Hunters destined for San Miguel County contributed 232 jobs, $7.7 million in labor income, $12.5 million towards the state GDP, and $1.3 million in state and local tax revenue in 2013.[34]

Recreation in the Upper Pecos is clearly vital to local economies, and helps diversify the state's economy overall, creating more opportunities for individuals, families, and communities – including future generations – to thrive in New Mexico.[35] Indeed, Governor Michelle Lujan

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[32] N.M. Dep't of Game & Fish, The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis at 14-15, Table 5 (2014) *available at* http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf.
[33] *Id*. at 16, Table 6.
[34] *Id*. at 21, Table 11.
[35] Berrens, et al., Economic and Community Benefits of Protecting New Mexico's Inventoried Roadless Areas at 68 (2006) *available at* www.sustainable-economy.org ["Berrens et al. 2006"];

Grisham and the New Mexico Legislature have recognized the importance of outdoor recreation to economic development in New Mexico. In 2019, the legislature passed — and the Governor signed — Senate Bill 462, creating an Outdoor Recreation Division within the Economic Development Department, and an accompanying Outdoor Recreation Infrastructure Fund. ONRW designation to protect these recreationally significant waters of the Upper Pecos Watershed would complement this legislation.

Much of the water in New Mexico flows from relatively intact forests and congressionally designated wilderness areas. The Commission has recognized the high quality of these waters, stating in its 2000 report to Congress that the majority of waters determined to fully support designated uses "are in wilderness areas or in watersheds protected from anthropogenic impacts."[36] Several 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. Such a valuable ecological service provides potentially significant nonmarket economic benefits and can save vast sums of money and bolster the adaptive capacity and resilience of area municipalities both ecologically **and** financially in the face of climate change.

U.S. Forest Serv., Landscape Scale Assessment for the Pecos River Headwaters Watershed (2004) ["USFS 2004"].

[36] N.M. Dep't of Game & Fish, Habitat Fragmentation and the Effects of Roads on Wildlife and Habitats at 8 (Jan. 2005) *available at* http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Effects-of-Roads-on-Wildlife-and-Habitats.pdf (citing N.M. Water Quality Control Comm'n, Water Quality and Water Pollution Control in New Mexico: A Report Prepared for Submission to the Congress of the United States by the State of New Mexico Pursuant to Section 305(b) of the Federal Clean Water Act (2000)).

Protecting headwaters increases the resilience of downstream reaches to extreme heat, drought, and increased intensity of storms.[37] The designation of the Upper Pecos Watershed would also contribute to efforts to meet the objectives set out by Governor Lujan Grisham in her 2019 Climate Plan.[38] That plan originally identified ONRW nominations as important steps for mitigating the impacts of a changing climate.

There is no way to overstate or overvalue the deep historical and cultural significance of this watershed to the State as well as nationally. The historical Pecos Pueblo and current day Jemez Pueblo traditions and cultural activities depend on the health of the Pecos River. The traditional agricultural practices handed down from the early Spanish settlers depend on the clean water from the Pecos River to feed acequias. The communal respect for and caring of these acequias, and the incorporation of that collective approach into water management in times of scarcity, is a vital cultural asset to the region. This nomination will ensure that future generations are able to carry on these rich historical and cultural practices through preservation of clean water in the Upper Pecos River.

b. Recreational Significance

Recreational opportunities in the waters of the Upper Pecos Watershed abound. The watershed draws people from across New Mexico and the United States, providing a significant boost to local and state economies.[39] Annually, there are thousands of visitors to the campgrounds in the nominated area. Multi-generational family gatherings near the river —

[37] Palmer et. al., Climate Change and River Ecosystems: Protection and Adaptation Options (July 2009) *available at* https://link.springer.com/article/10.1007/s00267-009-9329-1.
[38] New Mexico Interagency Task Force, New Mexico Climate Strategy at 25 (Nov. 2019) *available at* https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf.
[39] Berrens et. al. 2006; USFS 2004.

whether at campgrounds or day-use areas, such as the Dalton site — are popular among local users.[40] Recreational activities in the Upper Pecos include camping, hiking, horseback riding, hunting, fishing, bird-watching, photography, backpacking, bike riding, and rafting. Several local outfitters lead seasonal excursions into the wildlands surrounding the Upper Pecos.

The 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.[42] Within that "trout water area," Many fly fishermen use the area, with the New Mexico Department of Game and Fish ("NMDGF") listing 140,835 angler days per year for the mainstem of the Pecos River from the Village of Pecos upstream to Cowles Campground.[43] Almost the entire nominated stretch of the mainstem of the Pecos River is included in this section. In addition, the NMDGF reports that there are up to 10,000 more angler days per year in eight of the mainstem's nominated, named tributaries. [44] Given that data were available for only eight of the fifteen named tributaries, this number is likely much higher for the watershed as a whole.

Given that the NMDGF Report on the Economics of Fishing, Hunting, and Trapping[45] reported 118,814 San Miguel County-wide annual fishing days in 2013, the annual ranges of

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[40] U.S. Forest Serv., Final Pecos Wild and Scenic River Management Plan at 7 (July 2003) *available at* https://www.rivers.gov/documents/plans/pecos-plan.pdf.
[41] *Id*.
[42] N.M. Dep't of Game & Fish, 2019 Fishing Waters Map (Special Trout Waters) *available at* http://www.wildlife.state.nm.us/download/fishing/maps/Fishing-Waters-Map-RIB-2019-New-Mexico-DGF.pdf.
[43] *See* Appendix B (reporting fishing days, as provided by Eric Frey, N.M. Dep't of Game & Fish (January 21, 2020)).
[44] *Id*.
[45] N.M. Dep't of Game & Fish, The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A Statewide and County-level Analysis at 54 Table A-49 (2014) *available at* http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf.

83,000 to 140,000 angler days per year on the mainstem of the Pecos River (the nominated stretch of the Pecos River from Dalton Creek upstream to Windsor Creek falls) indicates that the majority, and perhaps almost all, of the San Miguel County angler days reported in 2013 were on the Pecos River. Therefore, it is reasonable to conclude that the Upper Pecos Watershed is the most popular fishing destination in the county and has exceptional recreational significance to the region.

Fly fishing guides have named the Upper Pecos River number six (out of eleven) of the top-rated, best places to fly fish in New Mexico.[46] Within the Pecos Canyon, the Pecos River is among New Mexico's best cold-water fisheries.[47] Indeed, one of the designated uses of the Pecos is "high quality, cold-water fisheries."[48] The exceptional recreational significance of the nominated watershed is also tied to its economic significance.[49]

Data provided from NMDGF show that 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. The output of this search, a detailed species list, can be found in Appendix D of the nomination. Table 4 summarizes the number of SERI found in each nominated drainage for which there was data. Of particular note, the highest Species of Economic and Recreational Importance are in the upstream tributaries and mainstem, all crossing into the Pecos Wilderness.

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[46] Guide Recommended Fishing Tips, *11 Best Places to Fly Fish in New Mexico*, https://guiderecommended.com/fly-fish-new-mexico/ (last visited Apr. 9, 2020).
[47] Upper Pecos Watershed Ass'n, *Pecos River Habitat and Riparian Restoration at Mora Recreation Area (2012 & 2013)* https://pecoswatershed.org/projects/completed-projects/mora-recreation-area/ (last visited Apr. 9, 2020).
[48] U.S. Forest Serv., Final Pecos Wild and Scenic River Management Plan at 10 (July 2003) *available at* https://www.rivers.gov/documents/plans/pecos-plan.pdf.
[49] *See infra,* Section 5.1.

As further support for nomination of the watershed as a whole, protection of the Upper Pecos Watershed is critical to maintain the healthy habitat and exceptional water quality for these species that don't recognize that wilderness boundary.

All of the aforementioned recreational activities — and accompanying economic benefits — are intricately connected to the pristine waters that originate and flow through the Upper Pecos Watershed. This scarce natural resource is the foundation upon which all plant and animal life in the area ultimately depend. In nominating the waters of the Upper Pecos Watershed as ONRWs, the Petitioners intend to ensure that all of the surface waters of the State inside the nominated area are managed so that their outstanding recreational values are protected for generations to come.

c. Ecological Significance

The nominated waters are also of exceptional ecological significance. For one, the waters of the Upper Pecos support a diverse array of wildlife species, including Rocky Mountain bighorn sheep, elk, mule deer, mountain lions, bobcats, and golden eagles. The 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.

i. Fish

The Pecos River is a productive fishing stream and is home to one of the few remaining populations of New Mexico's native cutthroat trout. There are only a limited number of locations in New Mexico drainages that support populations of this species. Within the nominated stretches of waters, these include:[50]

- Jack's Creek (from Highway 63 to the Pecos Wilderness boundary)
- Macho Creek, including the North Fork of Macho Creek, and Tributary #1

[50] Personal communication (email) with Eric Frey, NMDGF Fisheries biologist, July 23, 2020.

- Dalton Creek
- Wild Horse Creek
- Indian Creek
- Doctor Creek

The NMDGF also plans to restore Rio Grande cutthroat trout ("RGCT") populations to Willow Creek. An ONRW designation can serve as a protective "backstop" to the RGCT's further population depletion that can assist in the species' conservation and recovery and thereby decrease the likelihood that federal Endangered Species Act ("ESA") listing might become necessary. This potential to avoid the federal listing of one of New Mexico's native trout species – and its State fish – makes ONRW designation of these waters of especially great ecological significance to the State.

ii. Wildlife

The nominated area also supports many species identified by the NMDGF as Species of Greatest Conservation Need ("SGCN").[51] To be considered a SGCN, a species must meet at least one of the following conditions: declining, vulnerable, endemic, disjunct or keystone. The nomination details the number of SGCN by named water in Table 5 of the Petition.

The sheer numbers of these species are worth noting. Ranging from no less than 14 in Bear Creek to 23 found in Indian Creek, the fact that eight of the drainages have at least 20 SGCN demonstrates the ecological significance of this watershed.

Table 6 of the Petition details the federal- or state-listed threatened species in those drainages as well. The Mexican Spotted Owl and Peregrine Falcon are most frequently

[51] Spreadsheets and maps of species provided by the NMDGF are included in Appendix D of the Petition.

represented in the named drainages, with a presence of the Spotted Bat, Boreal Owl, and/or Bald Eagle noted in three of them.

iii. Plants

The nominated area supports one federally-endangered, and several state-endangered and special status plant species. Special Status Plant Species is a term used in the scientific community for plant species that are considered sufficiently rare that they require special consideration and/or protection and should be, or have been, listed as rare, threatened, or endangered, by either federal or state agencies. The Forestry Division of the New Mexico Energy Minerals and Natural Resources Division maintains a comprehensive list of endangered plant species,[52] several of which occur in the nominated area, as illustrated in Tables 7-17 of the Petition. The NMDGF has provided a list of Special Status Plant Species by Drainage that can be found in the Petition's Appendix D.[53]

The Holy Ghost ipomoposis (*Ipomopsis sancti-spiritus*) was listed as federally endangered under the ESA in 1994 by the U.S. Fish and Wildlife Service. At that time, its distribution was limited to a two-mile section of Holy Ghost Canyon, and it was extremely susceptible to extinction as a result. To combat this threat, recovery efforts focused on expanding the plant's distribution to adjoining drainages. NMDGF currently lists the Holy Ghost ipomoposis 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. Additionally, the species now lives in new sites along Holy Ghost Creek. Efforts to recover the species have demonstrated positive results and have

[52] The list of state endangered plant species can be found in Appendix E of the Petition.
[53] The NMDGF provided a comprehensive special species lists by drainage. These lists can be found in Appendix D of the Petition.

enjoyed significant community support. ONRW designation would similarly aid the Holy Ghost ipomoposis by providing a safeguard against any inappropriate disturbance to the species' habitat that could undermine recovery efforts and lead to its extinction.

This information demonstrates the ecological significance of the Upper Pecos Watershed. ONRW designation in the Upper Pecos Watershed would help ensure that healthy populations of the area's flora and fauna continue to thrive and would provide vital added protections for endangered and threatened species and their habitat.

d. Significant Attributes

The nominated waters satisfy the "significant attributes" designation criterion in 20.6.4.9.B(1) NMAC in two ways: (1) the nomination includes waters that are a significant attribute of a Wild and Scenic River (the Pecos River) and (2) the nomination includes waters that are a state Special Trout Waters.

i. Special Trout Waters

Fishing on the Pecos River is of such high quality and popularity that two stretches of the nominated area include state Special Trout Waters. Special Trout Water designations aim to enhance New Mexico's unique angling opportunities and promote native trout conservation.[54] The nominated area includes the following state Special Trout Waters:

- Jack's Creek from the waterfalls located 0.25 miles downstream of NM Hwy. 63 crossing upstream to its headwaters; and
- "Pecos Box" (from the Rio Mora confluence to Cowles)

[54] N.M. Dep't of Game & Fish, 2019-2020 Fishing Rules & Info at 19–21, *available at* http://www.wildlife.state.nm.us/download/publications/rib/2019/fishing/2019_20-New-Mexico-Fishing-Rules-and-Info.pdf.

An ONRW designation will complement management of these state Special Trout Waters by protecting the water quality of these segments and will also benefit downstream restoration efforts.

ii. Wild and Scenic Rivers Act designation

To be designated under the Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271, et seq. ("WSRA"), rivers must "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values."

Over 20 miles of the Pecos River (specifically, 20.5 miles) — from Davis Creek near the town of Tererro, upstream to the headwaters — are designated under the WSRA.[55] This Wild and Scenic designation extends down into 7-miles of the nominated segment, encompassing almost half of the total 14.11-mile length of the nominated stretch of the Pecos mainstem.

The federal designation of this 7-mile stretch of the Pecos River as having outstandingly remarkable recreational value is similar to the Commission's ONRW designation of a water with exceptional recreational significance because both recognize the immense recreational value of this stretch of river. While the two designations share similar, mutually reinforcing criteria, ONRW designation strengthens, and does not duplicate, water quality protections for the Wild and Scenic portion of the Pecos River. Specifically, the WSRA does not provide comprehensive water quality-based protections. This ONRW nomination would provide important water quality-based protections to help ensure that the federally-designated segment retains its outstandingly remarkable recreational value in the long term. Surface waters designated as ONRWs are afforded the highest level of water quality protection under the Commission's Antidegradation Policy and Implementation Plan in 20.6.4.8 NMAC and as Tier III waters in the Water Quality

[55] 16 U.S.C. § 1274(a)(110); *see also* USFS 2004, *supra* n.18.

Management Plan-Continuing Planning Policy. These water quality protections would safeguard the Upper Pecos against new or increased pollution and degradation and also boost adaptive capacity and watershed resilience in the face of ever-increasing threats from climate change.

e. Good Water Quality and Not Significantly Modified

The criterion at 20.6.4.9.B(3) NMAC requires that existing water quality be equal to or better than the numeric criteria for protection of aquatic life and contact uses and the human health-organism only criteria, and that the water has not been significantly modified by human activities in a manner that substantially detracts from its value as a natural resource. The nominated waters have current high water quality conditions and have not been significantly modified. Accordingly, the nominated waters meet this criterion.

i. Water quality

In sections 20.6.4.52, 97, 98, and 400 NMAC, New Mexico has established uses and water quality criteria for all of the waters of the State. The waters of the Upper Pecos Watershed included in the Petition are designated for various combinations of the following uses: high quality cold water aquatic life, warmwater aquatic life, marginal warmwater aquatic life, livestock watering, wildlife habitat and primary contact (also known as swimming or activities that are likely to result in immersion), domestic water supply, fish culture, irrigation, and public water supply.

A summary of designated uses, water quality criteria and results of most recent assessment is in Table 18 of the Petition. As demonstrated in Table 18, most of the nominated waters meet or exceed water quality criteria associated with the **aquatic life and contact uses** — the two uses listed as part of the ONRW nominating criteria at 20.6.4.9.B(3) NMAC. Only three of the 15 named tributaries — Macho Canyon Creek, Dalton Canyon, and Willow Creek — do

not meet water quality standards associated with the aquatic life use. It is important to note that just one water quality parameter is exceeded: specific conductance.[56] All three are in category 4A for overall attainment of water quality standards in the State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report. This means they are impaired for one or more designated uses, but a Total Maximum Daily Load ("TMDL") has already been completed for these waters. A TMDL is a calculation of the carrying capacity of a waterbody with respect to a particular pollutant. To be listed in the 4A category, all TMDLs must have been developed and approved by the EPA such that, when implemented, they are expected to result in full attainment of the applicable water quality standard.[57] In addition, Willow Creek has been listed by the New Mexico Environment Department as a National Pollutant Discharge Elimination System success story.[58]

The assessment unit applied to the entire nominated segment of the mainstem of the Pecos River meets all tested water quality parameters, except for temperature. This recent impairment was documented in the most recent Integrated Report to EPA, however the sampling was conducted and impairment was documented well downstream from the nominated section of the watershed.[59] The Pecos assessment unit covers quite a large area – from the Wilderness boundary downstream to Alamitos Creek, which is located below the Village of Pecos. All

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[56] *See* N.M. Env't Dep't, Clean Water Act 303(d)/305(b) Integrated Report, Appendix A at 266, 276, 291, *available at* https://www.env.nm.gov/wp-content/uploads/sites/25/2018/03/Appendix-A-Integrated-List.pdf (including Dalton Canyon (p. 266), Macho Canyon Creek (p. 276), and Willow Creek (p. 291)).

[57] *Id.* at iii.

[58] *See* N.M. Env't Dep't, Clean Water Act 303(d)/305(b) Integrated Report, at pp.43-44, *available at* https://www.env.nm.gov/surface-water-quality/303d-305b/

[59] 2020-2022 State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report, *available at* https://www.env.nm.gov/surface-water-quality/wp-content/uploads/sites/25/2018/03/WQCC-approved-2020-IR_120820.pdf

sampling that was done for this recent listing was conducted either in the town of Pecos or downstream closer to Alamitos Creek.[60]

As shown in Table 18, a number of the named tributaries in the nominated area have not been assessed.

ii. Not significantly modified by human activities

The ONRW existing water quality nominating criteria requires that "the water not be significantly modified by human activities in a manner that substantially detracts from its value as a natural resource." 20.6.4.9.B(3) NMAC. While a road follows the river along the mainstem of the Pecos River in the nominated area, it does not substantially detract from the river's ONRW value or its value as a natural resource. As detailed above in the Recreational Significance Section VI.B., the nominated area is a major fishing destination, and this high recreational use is facilitated by the easy access that the nearby roads provide. The one canyon that may not meet this component of the water quality ONRW nominating criterion is Willow Creek, because it has been substantially impacted by past mining activity.

VII. SUMMARY

There is no doubt that designation the Upper Pecos Watershed as an ONRW would be of great benefit to the State of New Mexico and would further enhance the extraordinary economic, recreational, ecological, and cultural values the area already possesses. The waters in the watershed meet several ONRW criteria, and all waters within the watershed deserve ONRW designation based on these criteria. First, the entire watershed demonstrates exceptional recreational significance, and deserves Outstanding Waters designation based on this criterion

[60] Personal communication with Devin Kennemore, the biologist that conducted the sampling used in the 2020 assessment process, March 8th, 2021.

alone. Second, the watershed also possesses exceptional ecological significance. Third, two reaches of the nominated waters are state Special Trout Waters. Fourth, seven miles of the nominated Pecos River are designated as a Wild and Scenic River under the WSRA. Finally, the waters in the watershed have high water quality and have not been significantly modified by human activities.

Respectfully submitted on this 10th day of March, 2021.

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PETITIONERS' EXHIBIT

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PROFESSIONAL SUMMARY

- National expert on Clean Water Act programs and state/local applications
- Experienced policy and regulatory expert witness
- Effective written and verbal communicator
- Experienced and confident public speaker
- Skilled policy trainer and translator, including webinars
- Confident and flexible facilitator, including web meetings

Program, Policy, and Regulatory Analysis

Analyzed federal, state, and local water programs, policies and regulations and their implementation.

- Analyzed state and federal legal strategies for protecting and restoring tribal water quality in Alaska.
- Performed multi-state policy and regulatory analysis and developed policy strategies in Delaware River Basin for use by NGO, foundation and academic staff.
- Analyzed and promoted the potential for green streets in mid-sized cities to address combined sewer overflows: initial focus on Nashville, Tennessee.
- Examined stormwater programs throughout the Mississippi River Basin.
- Produced two editions of the Clean Water Act Owner's Manual and developed an online Clean Water Act training (www.cleanwateract.org) used by hundreds of individuals and organizations.

Intensive Consultation and Expert Testimony

Provided place-based consultation and support on changes to water policies, programs, and regulations. Supported the creation and functioning of basinwide or statewide coalitions. Provided expert testimony before state and federal deliberative bodies.

- Yukon River Intertribal Watershed Council (AK) – presented legal strategies related to their water quality oversight authority.
- Amigos Bravos (NM) and Tennessee Clean Water Network - guided design and improvement of antidegradation policies. Developed and delivered expert testimony before:
    - New Mexico Water Quality Control Commission on creation of a process for designating Outstanding National Resource Waters.
    - Water Division of Tennessee Department of Environment and Conservation on improvements to Tennessee's antidegradation policy.
- Neuse Riverkeeper – provided regulatory guidance on protection of drinking water supply for Raleigh, NC from excessive nitrogen pollution.
- Alabama Stormwater Partnership – supported improvement of permits for managing stormwater pollution through regulatory analysis.

Policy Translation and Training

Designed, developed, tailored, and delivered hundreds of trainings for NGOs, agencies, tribes, lawyers, and individuals. Trainings ranged from general education, to focused hands-on workshops, to strategy sessions, to training of trainers.

- Multi-day locally tailored trainings on the Clean Water Act in 26 states and with more than a dozen tribal entities. Met with state and tribal agencies, facilitated meetings to determine areas of focus and outcomes and developed follow-up action and implementation steps.
- Designed and delivered trainings to assist NGO and agency staff work better together at the state and EPA region level.
- Scoped, designed, and delivered trainings that connected community science groups and tribal science staff to the regulatory context of their work. Identified methods and processes for submitting data to local and state agencies.

Facilitation

Guided groups interested in engaging water programs and policy tools to address watershed problems. This work has been multi-year, multiple meetings or just one gathering.

- Convened and facilitated Alaska tribes around water quality law and policy strategies.
- Convened and facilitated meetings in Southeast states among NGOs, state water quality agencies and USEPA to build relationships, discuss challenges and identify opportunities for mutual benefit.
- Facilitated meetings of Mississippi River Collaborative organizations over more than a decade,10-state coalition focused on reducing nutrient pollution and the Dead Zone in the Gulf of Mexico.

Sustainability and Resilience Planning

Identified opportunities to work with local officials on strategies that enhance community and watershed resilience and promote local involvement in sustainable water practices.

- Promoted watershed-based stormwater management in southeastern Michigan; worked closely with two local governments, one local NGO and three technical experts.
- Coordinated the expansion of community-based depaving to south Puget Sound with Portland-based Depave, local agencies and a Washington state NGO.
- Crafted community-based riparian restoration model for urban watersheds in the Lower Willamette River; promoted private landowner motivation and leadership.

WORK EXPERIENCE

River Network, Portland, OR
Oregon Environmental Council, Portland, OR
U.S. Army Corps of Engineers, Portland, OR
Resources for the Future, Washington, DC
Industrial Economics, Inc., Cambridge, MA
Charles River Associates, Inc., Boston, MA

EDUCATION

Nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC; Master of Environmental Management, Resource Economics and Policy.
Yale University, New Haven, CT; Bachelor of Arts, Economics.

PETITIONERS' EXHIBIT

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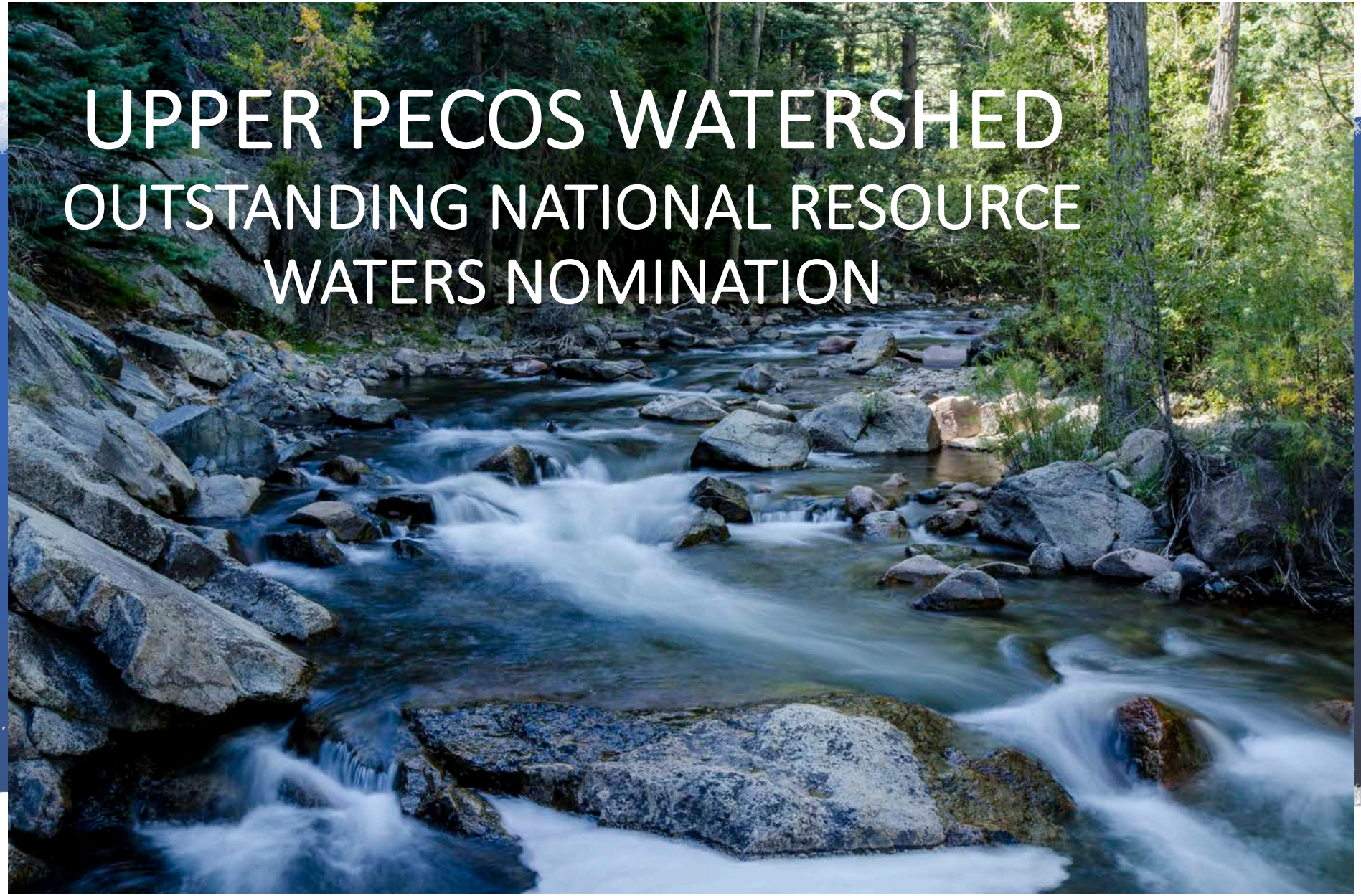


UPPER PECOS WATERSHED
OUTSTANDING NATIONAL RESOURCE WATERS NOMINATION

Gayle Killam

Water Policy Pathways

Testimony to Water Quality Control Commisssion

April, 2021

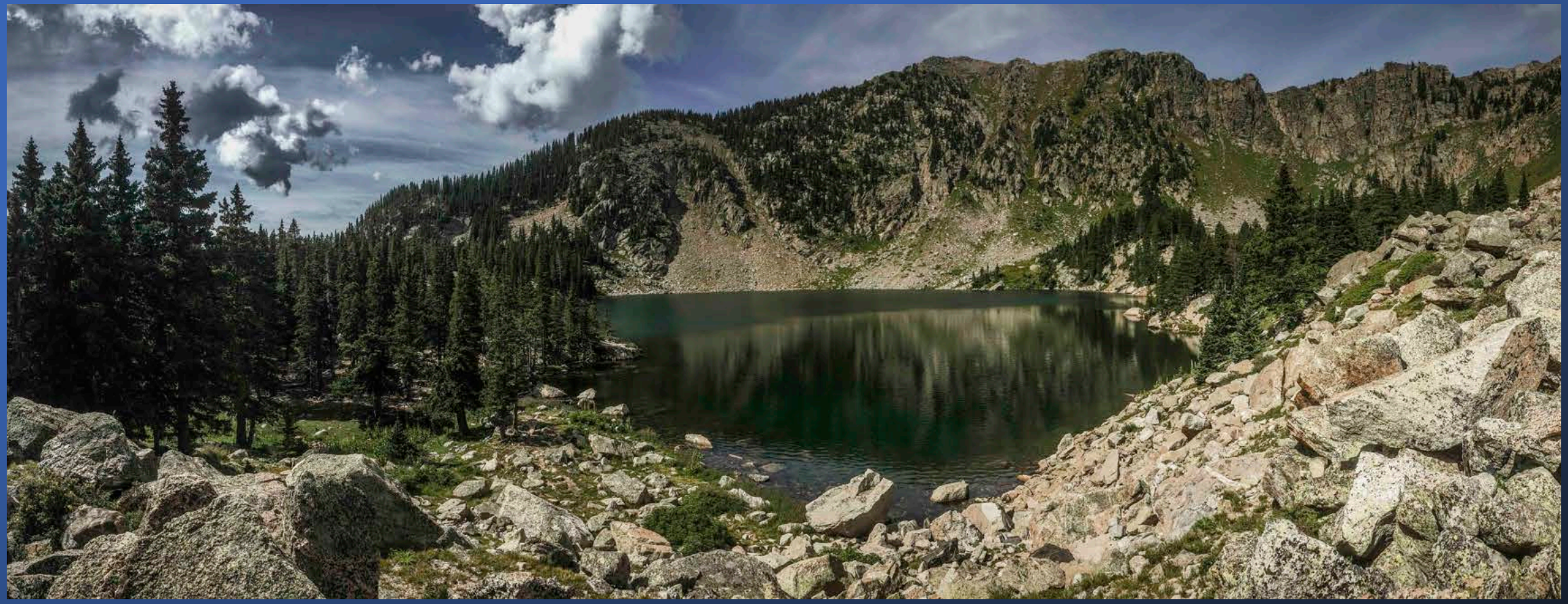
Water policy pathways

WATER POLICY PATHWAYS

- **Clean Water Act implementation in dozens of states**
- **NM WQCC Antidegradation procedures**
- **Expertise in regulatory analysis and training**
- **Worked with NGOs, coalitions, federal and state agencies, local governments, private foundations**

TESTIMONY OVERVIEW

- REGULATORY CONTEXT FOR OUTSTANDING WATERS
- WATERSHED SCALE
- APPLYING OUTSTANDING WATERS CRITERIA TO UPPER PECOS WATERSHED



CLEAN WATER ACT

OBJECTIVE:

RESTORE AND MAINTAIN THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF THE NATION'S WATERS

MEETING CLEAN WATER ACT OBJECTIVE

WATER QUALITY STANDARDS

- Designating uses
- Setting protective water quality criteria
- Developing "antidegradation policy and procedures"

MEETING CLEAN WATER ACT OBJECTIVE

WATER QUALITY STANDARDS

- Designating uses
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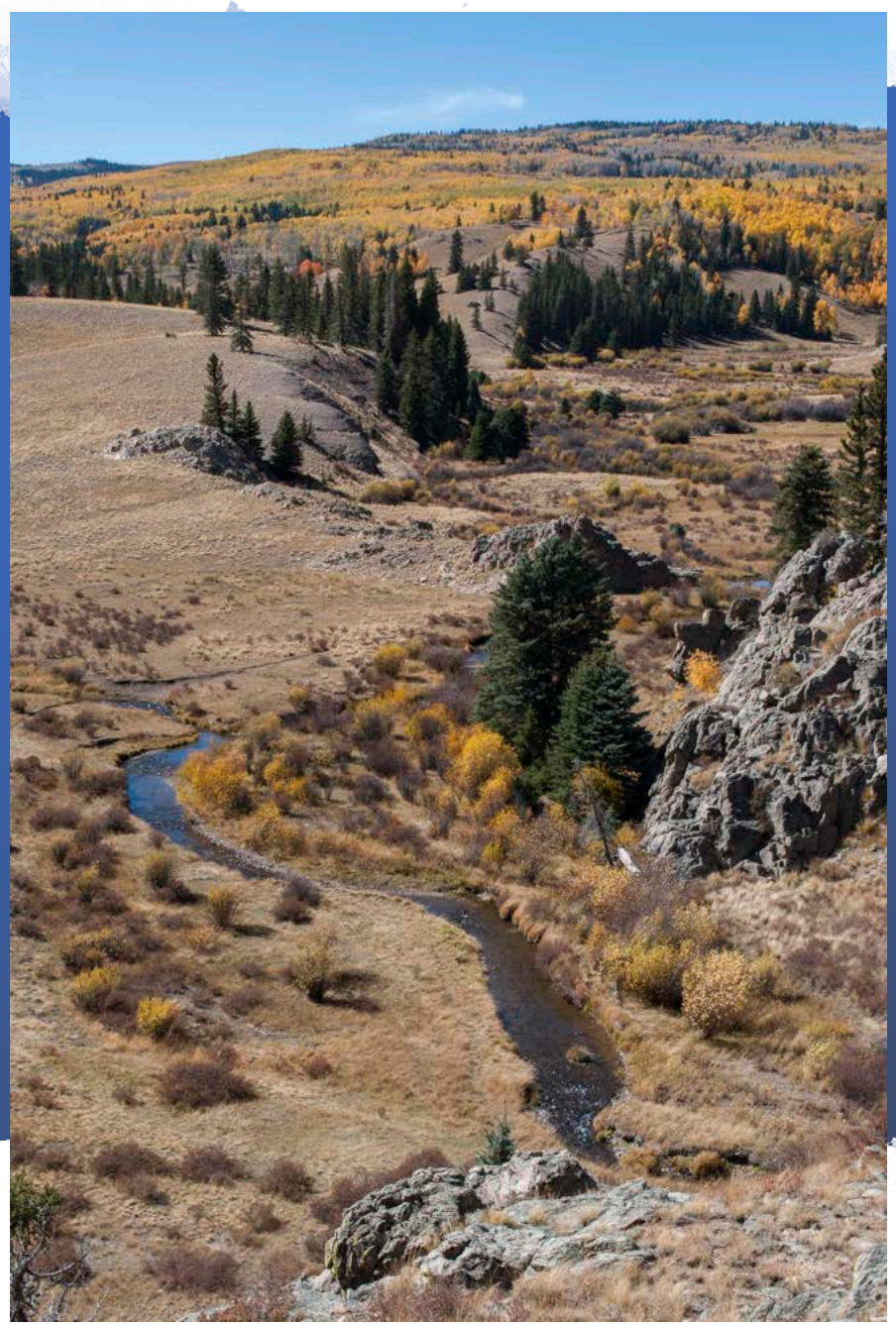
- Developing "antidegradation policy and procedures"



ANTIDEGRADATION

- "**MAINTAIN" INTEGRITY** - purpose of antidegradation is to "keep healthy waters healthy"
- Protections outlined in Federal Antidegradation Policy - 40 CFR 131.12
- Component of <u>every</u> state's water quality standards
- State policy must be consistent with Federal policy

COMPONENTS (“TIERS”) OF ANTIDEGRADATON

TIER 1: Protect existing uses

TIER 2: Guard against degradation of “high quality” waters

TIER 3: Protect waters with recreational and ecological significance

COMPONENTS ("TIERS") OF ANTIDEGRADATON

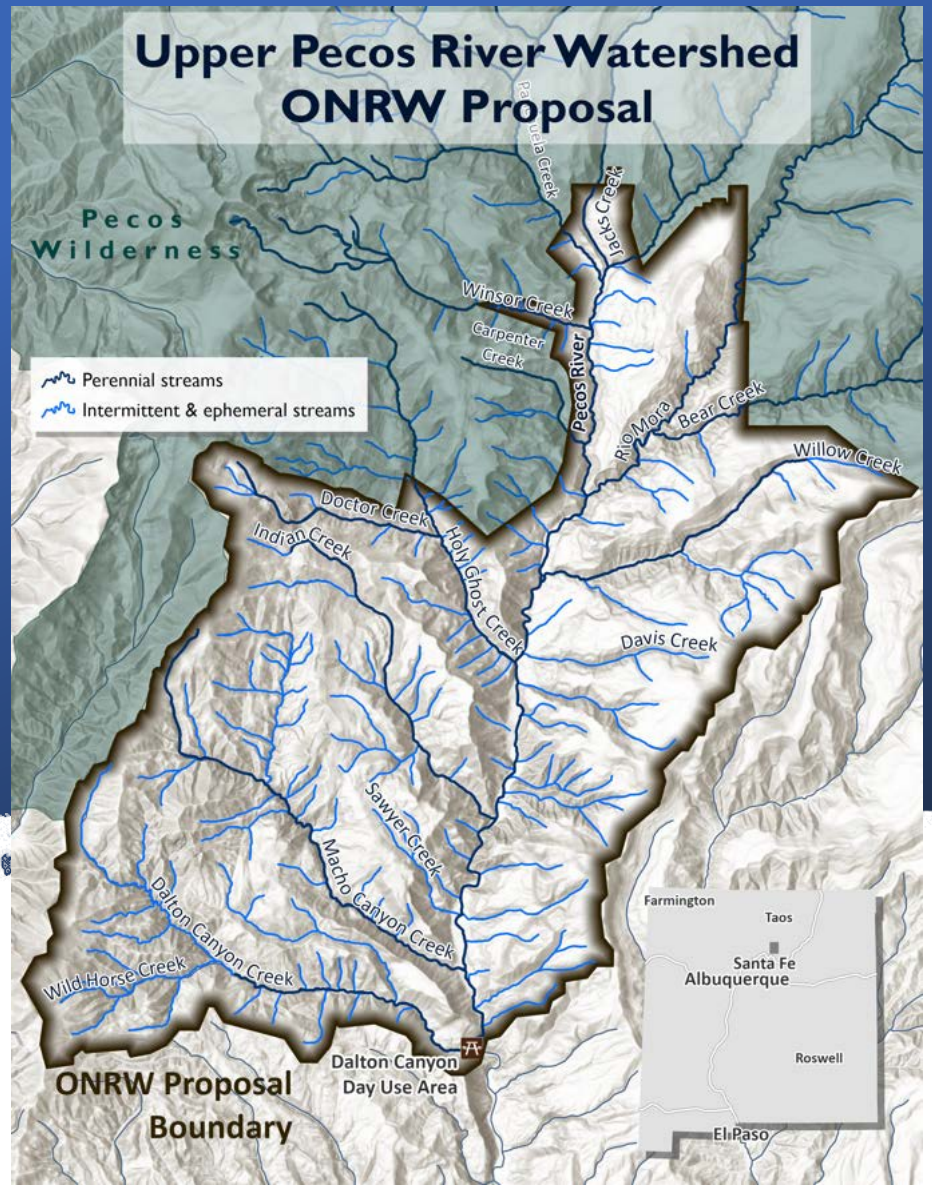
- **Protect existing uses**
- **Guard against degradation of "high quality" waters**
- **Protect waters with recreational and ecological significance**

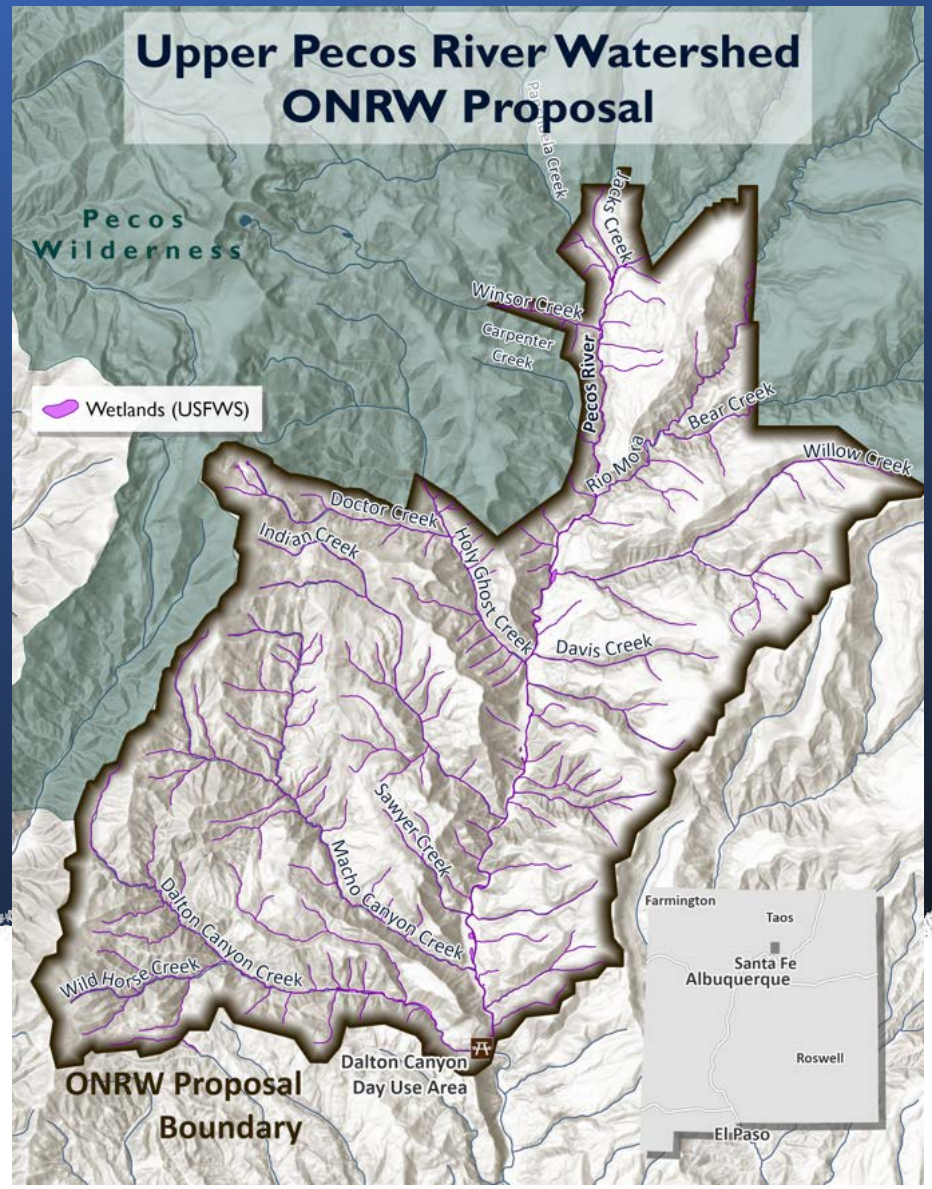
NEW MEXICO'S APPROACH TO OUTSTANDING WATERS

PART 1: NOMINATION PROCEDURES

- Map (pp.9-10)
- Statement and evidence demonstrating criteria met (pp.11-37)
- Water quality data (p.38)
- Discussion of activities that might reduce water quality (p.38)
- Additional evidence (e.g., economic impact) (p.41)
- Affidavit of publication of notice (p.43)

UPPER PECOS WATERSHED



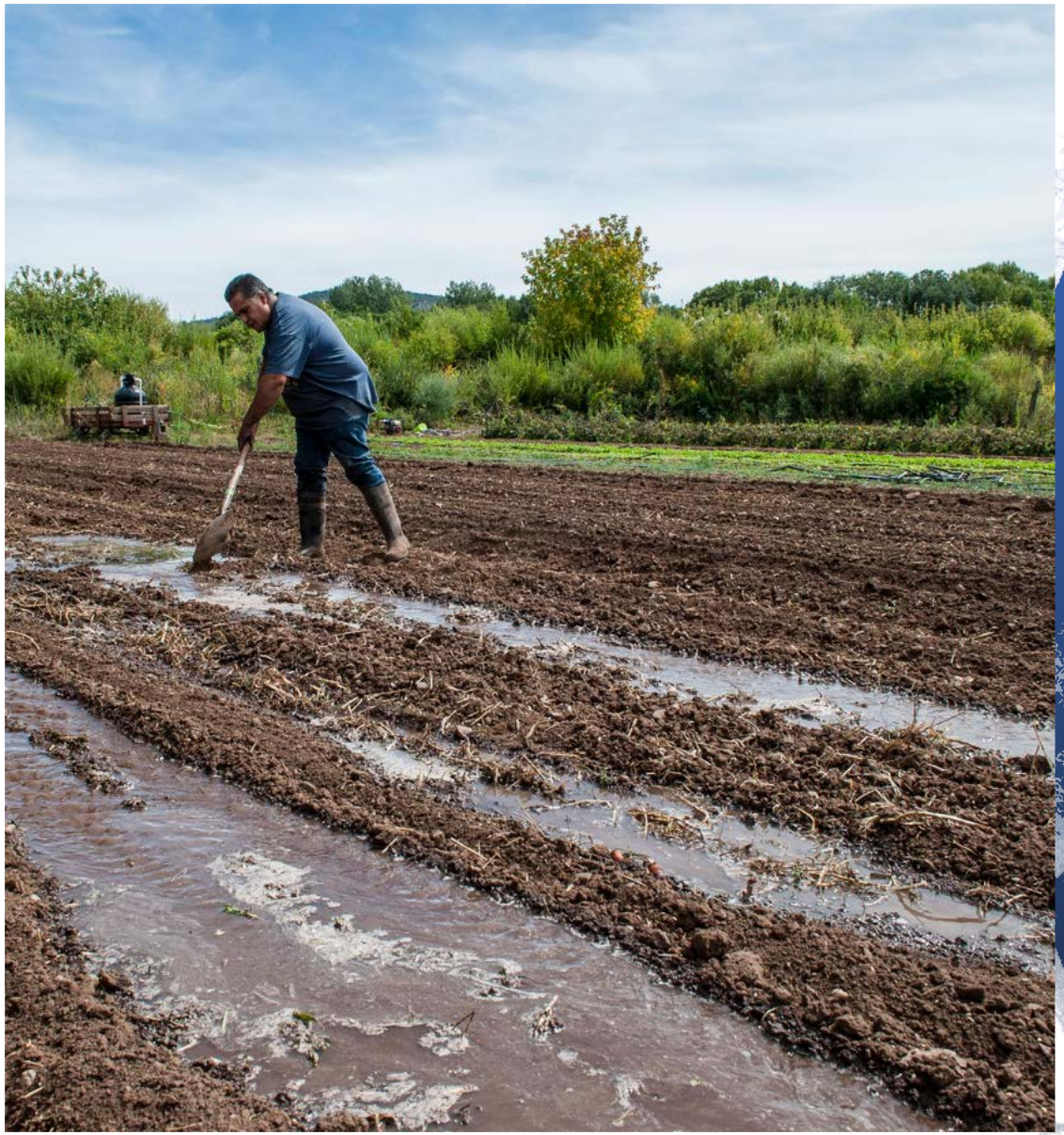


NEW MEXICO'S APPROACH TO OUTSTANDING WATERS

PART 2: ONRW CRITERIA

Benefit to the state AND

1. Significant attribute of designated special waters and locations OR
2. Exceptional recreational significance OR exceptional ecological significance OR
3. Existing water quality is equal to or better than that needed to protect aquatic life and contact uses AND has not been significantly modified by humans



OUTSTANDING WATERS DESIGNATION DOES NOT HALT…

- Preexisting land-use activities such as grazing with BMPs
- Acequia operation, maintenance, and repairs

OUTSTANDING WATERS DESIGNATION ALLOWS…

Temporary and short-term degradation

- Public health or safety
- Emergency response action
- Result in restoration or maintenance of physical, chemical or biological integrity

WATERSHED APPROACH

- All perennial, intermittent, and ephemeral surface waters and wetlands
  - Consistency and management efficiency
  - Scientific basis
  - Community connection

ONRW CRITERION: BENEFIT TO THE STATE AND

ONRW CRITERION: SIGNIFICANT ATTRIBUTE <u>OR</u>

- State special trout water
- National or state park
- National or state monument
- National or state wildlife refuge or designated wilderness area
- Designated under Federal Wild & Scenic Rivers Act

ONRW CRITERION: EXCEPTIONAL RECREATIONAL SIGNIFICANCE

OR

ONRW CRITERION: EXCEPTIONAL ECOLOGICAL SIGNIFICANCE

OR

ONRW CRITERION: GOOD WATER QUALITY

- Existing water quality is equal to or better than criteria for aquatic life and contact uses and human-health-organism only criteria

AND

- Waters are not significantly modified by human activities, detracting from natural resource value

UPPER PECOS WATERSHED MEETS CRITERIA

UPPER PECOS ONRW CRITERIA								
Criteria Met*	*Note only NM Benefit plus one other column required							
				Significant Attribute				
Waterbody/reach	**Stream miles and wetland acres (p.8)**	**Description (p.8)**	**NM Benefit (p.11-17)**	**State special trout water (p.29)**	**Wild and Scenic River (p.27-28)**	**Exceptional recreational significance (p.17-18, Appx.B)**	**Exceptional ecological significance (p. 19-26 , Appx.D)**	**Water Quality equal to or better than numeric criteria (p.30-38)**
Jack's Creek	**1.36 stream miles; 4.37 wetland acres**	From the confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	YES		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						8 SERI	Rio Grande Cutthroat Trout	
						790 angler days (2007-08)	15 SGCN	
						Trout water area (NMDGF)	Peregrine Falcon - threatened (state)	
							Plants - 5 special status, 2 state endangered	
Macho Canyon Creek	**29.32 stream miles; 76.85 wetland acres**	From the confluence with the Pecos River to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	MIXED
						5 SERI	Rio Grande Cutthroat Trout	YES - PC
								NO - HQColdWAL,

UPPER PECOS WATERSHED MEETS

- ✓ BENEFIT TO STATE and
- ✓ SIGNIFICANT ATTRIBUTE or
  - ➢ State Special Trout Waters
  - ➢ Designated Wild and Scenic River under WSA
- ✓ EXCEPTIONAL RECREATIONAL SIGNIFICANCE or
- ✓ EXCEPTIONAL ECOLOGICAL SIGNIFICANCE or
- ✓ WATER QUALITY EQUAL OR BETTER THAN NUMERIC CRITERIA

Thank you!

Gayle Killam
gayle@waterpolicypathways.com
www.waterpolicypathways.com

Water policy pathways

PETITIONERS' EXHIBIT

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UPPER PECOS ONRW CRITERIA

Criteria Met* ***Note only NM Benefit plus one other column required**

Waterbody/reach	Stream miles and wetland acres (p.8)	Description (p.8)	NM Benefit (p.11-17)	Significant Attribute: State special trout water (p.29)	Significant Attribute: Wild and Scenic River (p.27-28)	Exceptional recreational significance (p.17-18, Appx.B)	Exceptional ecological significance (p. 19-26 , Appx.D)	Water Quality equal to or better than numeric criteria (p.30-38)
Bear Creek	**2.41 stream miles;**	From confluence with the Rio Mora to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	Upstream of State Special Trout Waters		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout 6 SERI 93 angler days (2000-1) Trout water area (NMDGF)	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants 14 SGCN Peregrine Falcon - threatened (state)	NOT ASSESSED
Carpenter Creek	**0.32 stream miles; .98 wetland acres**	From confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	Upstream of State Special Trout Waters		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout 7 SERI Trout water area (NMDGF)	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants 16 SGCN Peregrine Falcon - threatened (state) Plants - 5 special status, 2 state endangered	NOT ASSESSED
Dalton Canyon Creek	**23.71 stream miles; 77.95 wetland acres**	From confluence with the Pecos River to the headwaters, including intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout 5 SERI Trout water area (NMDGF)	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants Rio Grande Cutthroat Trout 20 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state)	MIXED YES - PC NO - HQColdWAL, specific conductance (2012)
Davis Creek	**3.33 stream miles; 7.88 wetland acres**	From confluence with the Pecos River to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout 4 SERI Trout water area (NMDGF)	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants 21 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state) Plants - 1 special status, 1 state endangered	NOT ASSESSED
Doctor Creek	**6.28 stream miles; 19.37 wetland acres**	From the confluence with Holy Ghost Creek to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout 4 SERI Trout water area (NMDGF)	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants Rio Grande Cutthroat Trout 22 SGCN Peregrine Falcon, Spotted Bat, Boreal Owl - threatened (state) Plants - 2 special status, 1 state endangered	YES - HQColdWAL, PC

UPPER PECOS ONRW CRITERIA

Criteria Met* ***Note only NM Benefit plus one other column required**

				Significant Attribute				
Waterbody/reach	**Stream miles and wetland acres (p.8)**	**Description (p.8)**	**NM Benefit (p.11-17)**	**State special trout water (p.29)**	**Wild and Scenic River (p.27-28)**	**Exceptional recreational significance (p.17-18, Appx.B)**	**Exceptional ecological significance (p. 19-26 , Appx.D)**	**Water Quality equal to or better than numeric criteria (p.30-38)**
Holy Ghost Creek	**10.18 stream miles; 26.97 wetland acres**	From the confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						4 SERI 2764 angler days (2003-04) Trout water area (NMDGF)	21 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state) Plants - 1 ESA?, 2 special status, 2 state endangered	
Indian Creek	**17.49 stream miles; 46.37 wetland acres**	From the confluence with the Pecos River upstream to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						4 SERI 47 angler days (2001-02) Trout water area (NMDGF)	Rio Grande Cutthroat Trout 23 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state) Plants - 1 special status, 1 state endangered	
Jack's Creek	**1.36 stream miles; 4.37 wetland acres**	From the confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	YES		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						8 SERI 790 angler days (2007-08) Trout water area (NMDGF)	Rio Grande Cutthroat Trout 15 SGCN Peregrine Falcon - threatened (state) Plants - 5 special status, 2 state endangered	
Macho Canyon Creek	**29.32 stream miles; 76.85 wetland acres**	From the confluence with the Pecos River to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	MIXED
						5 SERI Trout water area (NMDGF)	Rio Grande Cutthroat Trout 22 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon, Spotted Bat, Boreal Owl - threatened (state) Plants - 2 special status, 2 state endangered	YES - PC NO - HQColdWAL, specific conductance (2012)

UPPER PECOS ONRW CRITERIA

Criteria Met* ***Note only NM Benefit plus one other column required**

Waterbody/reach	Stream miles and wetland acres (p.8)	Description (p.8)	NM Benefit (p.11-17)	Significant Attribute: State special trout water (p.29)	Significant Attribute: Wild and Scenic River (p.27-28)	Exceptional recreational significance (p.17-18, Appx.B)	Exceptional ecological significance (p. 19-26 , Appx.D)	Water Quality equal to or better than numeric criteria (p.30-38)
Panchuela Creek	**1.89 stream miles; 5.73 wetland acres**	From the confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						7 SERI 1410 angler days (2018-19) Trout water area (NMDGF)	16 SGCN Peregrine Falcon - threatened (state) Plants - 5 special status, 3 state endangered	
Pecos River	**49.93 stream miles; 188.40 wetland acres**	From the Dalton site upstream to Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	YES, from Rio Mora upstream to Cowles	YES	Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						7 SERI 140,835 angler days (2018-19) Trout water area (NMDGF)	23 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state) Plants - 5 special status, 3 state endangered	Alamitos Canyon to Jack's Creek is listed for temperature in 2020, however only sampling was far downstream from nominated section
Rio Mora	**6.19 stream miles; 24.9 wetland acres**	From the confluence with the Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	Upstream of State Special Trout Waters		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						2732 angler days (2016-17) Trout water area (NMDGF)	16 SGCN Peregrine Falcon - threatened (state) Plants - 3 special status, 1 state endangered	
Rito del Oso (Rio Mora to headwaters)	**mileage included in Rio Mora mileage numbers.**	From the confluence with the Rio Mora to the headwaters, including wetlands, intermittent and ephemeral tributaries.	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	Upstream of State Special Trout Waters		Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	Tributary to Rio Mora that has 16 SGCN, Peregrine Falcon - threatened (state) and 3 special status platns, and 2 state endangered plant.	YES - HQColdWAL, PC
						Trout water area (NMDGF)		
Sawyer Creek	**3.48 stream miles; 8.3 wetland acres**	From the confluence with the Pecos River to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	NOT ASSESSED
						4 SERI Trout water area (NMDGF)	18 SGCN Mexican Spotted Owl habitat - threatened (ESA)	

UPPER PECOS ONRW CRITERIA

Criteria Met* ***Note only NM Benefit plus one other column required**

Waterbody/reach	Stream miles and wetland acres (p.8)	Description (p.8)	NM Benefit (p.11-17)	Significant Attribute: State special trout water (p.29)	Significant Attribute: Wild and Scenic River (p.27-28)	Exceptional recreational significance (p.17-18, Appx.B)	Exceptional ecological significance (p. 19-26 , Appx.D)	Water Quality equal to or better than numeric criteria (p.30-38)
							Peregrine Falcon - threatened (state)	
Wild Horse Creek	**7.04 stream miles; 16.73 wetland acres**	From the confluence with Dalton Canyon Creek to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	NOT ASSESSED
						4 SERI Trout water area (NMDGF)	Rio Grande Cutthroat Trout 20 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon, Spotted Bat, Boreal Owl - threatened (state)	
Willow Creek	**14.46 stream miles; 37.54 wetland acres**	from the confluence with the Pecos River to the headwaters, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)			Camping, hiking, horsebackriding, hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	MIXED
						5 SERI	NMDGF plans to restore Rio Grande Cutthroat Trout	YES - PC
						1121 angler days (2003-04) Trout water area (NMDGF)	19 SGCN Mexican Spotted Owl habitat - threatened (ESA) Peregrine Falcon - threatened (state) Plants - 1 special status, 1 state endangered	NO - HQColdWAL, sediment and siltation, specific conductance (2004)
Winsor Creek	**2.65 stream miles; 7.83 wetland acres**	Pecos River to the Wilderness boundary, including wetlands, intermittent and ephemeral tributaries	Mitigate and adapt to climate change; historical and cultural significance; economic benefit (drinking water, outdoor recreation/tourism)	Upstream of State Special Trout Waters		hunting, fishing - trout, birdwatching, photography, backpacking, bike riding, rafting; trout	State and federal E&T status - petition pp. 19-26 lists and tables of wildlife, fish, and plants	YES - HQColdWAL, PC
						7 SERI 1449 (2007-08) Trout water area (NMDGF)	15 SGCN Peregrine Falcon - threatened (state) Plants - 6 special status, 3 state endangered	

PETITIONERS' EXHIBIT

7

STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY FRANK "PANCHO" ADELO

I. INTRODUCTION AND QUALIFICATIONS

My name is Frank "Pancho" Adelo. I was born and raised in Pecos. My family has been in business providing goods and services to residents and visitors to Pecos Valley for the past 102 years. I currently own a convenience store and take-out restaurant. I own twelve acres of irrigated pasture/farmland on the Acequia del Molino adjacent to the river in the heart of the Village. I am also President of the Upper Pecos Watershed Association ("UPWA"), a Petitioner in this matter, and was its Vice President before that, since its inception in 2006. My resume is attached as Petitioners' Exhibit 8. My testimony will address section 20.6.4.9.B NMAC, demonstrating that designation of the waters of the Upper Pecos Watershed as Outstanding National Resource Waters ("ONRWs" or "Outstanding Waters") will benefit the State of New Mexico.

II. TESTIMONY

I was very fortunate to grow up next to one of New Mexico's premier trout fisheries. I was also fortunate to grow up in an era before cell phones and video games. In grade school my close friends, Miguel Carrillo, Ricky Varela, Steve Sanchez, and I would ride our bikes to the river and fish. I caught my first fish behind the Pecos Benedictine Monastery. As soon as I could drive in 8th grade, after school I would get in my father's truck and race up the canyon to wet a line before dark. I took a keen interest in trout fishing and especially fly fishing.

I attended college in Western Massachusetts and received my degree in economics from the University of Massachusetts in Amherst. My flyrod accompanied me to Massachusetts. My first experience fishing in New England was on the Deerfield River. On this stream I became acutely aware that not all streams are of the same quality. Every pullout in the Deerfield River had a warning sign of the horns that signaled impending rise in water level. As I drove up the valley, I came across a gigantic structure, Yankee Rowe Nuclear power plant, America's third nuclear power plant and first large scale nuclear plant in the U.S. It was very striking because Western Massachusetts is fairly rural, and the Deerfield Valley is very picturesque. To see a structure of this enormity and this type in such a setting was quite perplexing. On another quest for trout, I drove up into New Hampshire. I came upon a stream that looked ideal for trout. I noticed the stream had a brownish tinge to it and was pretty much void of insect life. I found out that there was a paper mill upstream. Both experiences made me realize that river water quality, no matter the setting, is not always guaranteed.

When I returned home after college, I made it a point to preserve and conserve the Upper Pecos Watershed. Serving as President of UPWA is part of my work to protect this exceptional area.

a. About UPWA

UPWA was originally formed in 2006 by residents in the Pecos watershed who were concerned about environmental issues pertaining to the river. It is recognized as a 501(c)(3) nonprofit organization and is overseen by a nine-member Board of Directors. UPWA's primary goals are to protect and improve the health of the watershed; address significant ecological, and environmental issues in the watershed; and preserve traditional and cultural uses and benefit the local economy.

The Pecos Canyon is a hot-spot for tourism from Santa Fe, Albuquerque, and surrounding areas in the summer and fall for camping, hiking, hunting, and fishing. One of the ways UPWA is trying to help environmental concerns is to address the overuse and abuse of the campgrounds and recreation areas within the watershed. To date, UPWA has been awarded over 14 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.

UPWA was a leading advocate for the formation of the Pecos Canyon State Park, and collaborated with San Miguel County, the Village of Pecos, federal and state political representatives, the Pecos Business Association and other advocacy groups in favor of park legislation.

As another example of our efforts to protect the watershed, last year, the 2020 spring and summer season brought unprecedented numbers of visitors to Pecos Canyon with not a single public restroom open. UPWA acted swiftly, raised over $5,000 in three days, and installed ten portable-toilets in the Canyon. This effort not only helped protect the environment from human waste but also helped Santa Fe National Forest and Pecos Canyon State Park.

Additionally, together with the Pecos Business Association, Pecos Canyon State Park, Santa Fe National Forest, Truchas Chapter Trout Unlimited, Roadrunner Gambler 505 and San Miguel County, we organized "Dia de Rio y Camino," a community road and river cleanup event in October 2020. We had 139 volunteers come from as far away as Las Cruces, who drove by our office, and we handed out over 400 trash bags. Among our wonderful participants were students and teachers from Pecos Independent Schools and Santa Fe Prep.

b. About the Upper Pecos Watershed

The Upper Pecos Watershed (U.S. Geological Survey Hydrologic Unit Code 13060001, "Pecos Headwaters") is part of the larger Rio Grande Basin, located in north-central New Mexico about ten to twenty miles east of Santa Fe. The area covered by our Watershed extends from the headwaters of the Pecos River and its upper tributaries in the Sangre de Cristo Mountains to the point where Interstate Highway 25 crosses the Pecos, below its confluences with Cow Creek and El Rito. Our watershed includes the communities of Pecos, Tererro, Cowles, Glorieta, Upper and Lower Colonias, North and South San Ysidro, Rowe, and San Jose. The Village of Pecos is the only incorporated municipality in the watershed.

The Upper Pecos Watershed covers approximately 360,000 acres, ranging in elevation from over 13,000 feet in the Truchas Peaks to about 6,100 feet as it crosses Interstate 25. The watershed includes private lands, land grants, Santa Fe National Forest lands, the Pecos National Historical Park, and the Village of Pecos, as well as small parcels of Bureau of Land Management and state land. Major tributaries of the Pecos River in this part of the watershed include Willow Creek, Holy Ghost Creek, Cow Creek, Bull Creek, Glorieta Creek, and the Rio Mora. Vegetation ecological zones range from alpine tundra and grassland at the highest

elevations through spruce-fir, mixed conifer, and ponderosa forests, along with piñon-juniper, woodland savannah, grassland, and some sage at the lower elevations.

Our community views the Upper Pecos Watershed as a whole, interconnected system. The Pecos River has raised generations of kids and continues to do so. There is nothing more relaxing than to sit by the river and just be. One of the best things to do is to throw rocks in the river, as a symbolic way of letting go of your worries. Pecos is a small community, and but we all can agree that the river is our lifeblood.

The Upper Pecos Watershed is home to Rio Grande cutthroat trout, brown trout and rainbow trout, making it a desirable place to fish. Many campgrounds and hiking trails attract thousands of visitors every year fueling our local economy. You can go horseback riding in the wilderness for hours without meeting another person. Many people say that although they travelled the world they have never seen nor experienced anything like our magnificent Upper Pecos Watershed.

Pristine waters in which trout fish thrive attract tourists. Tourists support local businesses in the Pecos Village, such as eight lodging establishments, five restaurants, and over 16 other enterprises. Local businesses can then give back to our small community. Our river supports local farms who then offer fresh produce to the State's residents. Water and life are connected on many levels.

c. Community Support for Designating the Upper Pecos Watershed as ONRWs

UPWA has played a key role in obtaining and ensuring community support for designating the waters of the Upper Pecos Watershed as Outstanding Waters. We have been in touch with our members and the broader public regarding the ONRW nomination for the Upper Pecos Watershed through our monthly newsletter, which has kept the community informed about

the process. UPWA also used social media to draw attention to understanding the importance and significance of the nomination.

We made an announcement on our website and social media when the petition was filed in April 2020. We have also created a form on our website through which community members could voice their support for the ONRW nomination. This campaign generated over 100 letters of support which have been forwarded to the Water Quality Control Commission as public comments on the nomination. Between UPWA's mailing list and social media subscribers, we have reached over 3,000 people. UPWA is committed to keeping our community informed about the process and will continue to do so. We have hosted two public meetings (pre-Covid) where the ONRW nomination was presented. These meetings were attended by over 200 people from the local area. In addition, UPWA board members attended the San Miguel County and Village of Pecos public meetings where their respective resolutions in support of ONRW nominations were presented and passed. Numerous members of the public attended and commented in support of these resolutions at these meetings. The abundance of support we have received from members of the public, both locally, and across the State, and even the nation, has shown there is overwhelming public support for protecting the Upper Pecos Watershed as Outstanding Waters. See Petitioners' Exhibit 9.

d. Concluding Remarks

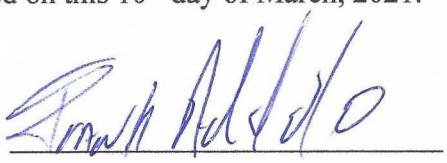
It is important to note that the Pecos River and its tributaries can still brag of its high-quality. Yes, we have an abandoned mine on the Pecos River, but because of the actions undertaken by the State and former owners of the mine, water quality in the Upper Pecos Watershed has improved over the past 30 years.

Also, in the past 30 years, the number of visitors to our watershed has increased. As noted earlier, in 2020 (and in large part, because of the pandemic), we saw a huge increase in the number of visitors to our watershed, all seeking nature, all seeking peace, all seeking a high-quality river to enjoy, which the Pecos and its tributaries readily provide.

Let us imagine for a moment that you had to conduct a cost benefit analysis of some project effecting the water quality of the Upper Pecos Watershed. Part of that equation would quantify how many visitors the river sees, how much they spend getting to the river and enjoying it, and doing the multiplication. What that analysis cannot do, however, is to put a figure on the number of people who would not accept having a high-quality watershed to use and enjoy. In other words, how much would you have to pay people not to have a high-quality watershed to enjoy – whether it be for fishing, hunting, hiking, worshipping, biking, camping, farming, etc. In fact, any cost-benefit analysis would be disingenuous because what the Upper Pecos Watershed provides is priceless. You cannot put a price on much of what our high-quality watershed provides. Ask residents of the valley, or any of the visitors we have had in the valley, especially those who came last year to escape the pandemic, on their willingness to give up a high-quality watershed: they would never be able to quantify that.

With this being said, I urge you to support our nomination of the Upper Pecos Watershed for ONRW status. Such designation would be a huge benefit to not only our local community, but to the State as a whole and all who visit, work, and play in the Upper Pecos region for both the present and future generations.

Respectfully submitted on this 10th day of March, 2021.



FRANK "PANCHO" ADELO, President
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PETITIONERS' EXHIBIT

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RESUME

Franklin Adelo (Pancho)

P.O. Box 175

Pecos NM 87552

Cell 505 470 5429 Business 505 757 2620

E-mail panchoadelo@hotmail.com

Education Background:

St. Michael's High School Santa Fe NM. 1986

University of Massachusetts Amherst. Bachelor of Arts-Economics, 1991

Career Background:

Adelo Company, Pecos, NM. Assistant Manager/Hardware Inventory Manager 1991-1996

El Paseo Bar and Grill, Santa Fe, NM. Mixologist. 1996-1999

Pancho Inc. Pecos, NM. President, Retail Fuel and Convenience, Take Out Food and Catering 1998-Present.

Upper Pecos Watershed Association, Pecos NM. Non-Point Source Pollution mitigation and watershed quality community organization. Vice President 2006-2019, President 2019-Present.

Casa Adelo LLC, Pecos, NM. Partner, Residential Real Estate, 2010-Present

JS&F LLC, Pecos NM. Partner. Residential Real Estate, 2010-Present

PETITIONERS' EXHIBIT

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Outstanding National Resource Waters Designation on the Upper Pecos Watershed

List of Select Letters of Support (As of March 10, 2021)

Brian Egolf, Speaker of the House, D – Santa Fe – 47

Senator Peter Wirth, Majority Floor Leader, D- Santa Fe -25

Thomas Salazar, D- San Miguel, Santa Fe & Torrance, District 70

Joseph Sanchez, Former Representative - D

Pecos Business Administration

Ralph Vigil, Chair, New Mexico Acequia Commission

Susan Livermore, Pecos River Open Spaces

Andy Otto, Santa Fe Watershed Association

Jarrett Sasser, High Desert Angler

Melissa Pardeahton Houser, Land Program Manager, Santa Fe Conservation Trust

William Zunkel, Friends of the Pecos National Historical Park

William Zunkel, Friends of the Santa Fe National Forest

Liliana Castillo, CAVU

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY RALPH VIGIL

I. INTRODUCTION AND QUALIFICATIONS

My name is Ralph Vigil, and I am the owner of Molino de la Isla Organics, LLC, a small organic farm located in Pecos, New Mexico. I am one of the Petitioners supporting the nomination of the Waters of the Upper Pecos Watershed as Outstanding National Resource Waters ("ONRW" or "Outstanding Waters"). I also serve as the chairman of the New Mexico Acequia Commission ("Acequia Commission"), and I have been a parciante on the Acequia del Molino, that gets its water from the Pecos River, all my life. My resume is Petitioner's Exhibit 11.

My testimony will address section 20.6.4.9.B NMAC, demonstrating that, in my opinion, designation of the waters of the Upper Pecos Watershed as ONRWs will benefit the State of New Mexico.

II. TESTIMONY

I have been using water from the Upper Pecos River to irrigate my family's land and crops for my entire life. In 2008, I established the Molino de la Isla Organics, LLC, in Pecos, to grow healthy food for my community and teach kids about acequias and about other traditional practices, like saving seeds. I am now incorporating regenerative agricultural practices and adding cattle to my operation in order to improve the health of my soil while conserving more water. During the school year, I provide greens from my farm to the local schools while educating young people about acequias and healthy foods. I also work with community centers in the Pecos region to help them provide healthy, fresh, and local food for their communities. I have a community-supported agriculture program where people pay a set amount to receive weekly shares of produce from my farm. I am currently expanding my operations to include a pilot-project to supply fresh produce to the Senior Center in Pecos, and eventually, to senior centers across San Miguel County.

Water is everything — the only reason we survive here is because of water; the only reason anything survives here is because of water. Sound water policy must be the number one priority because our livelihoods, and our very lives, depend on clean water. Clean water is essential for my small business. I divert water from the Pecos River into the Acequia de Molino and then into my fields to grow crops. My family has always been involved with the acequias. My great, great, great, great grandfather was the first Hispanic territorial governor of New Mexico. He established these acequias. The acequia that I'm on, Acequia del Molino, was developed for a wheat mill and now I am irrigating with the clean water from Acequia del Molino to make a living. If the water in the Pecos River is not clean, my farm and business will suffer. Outstanding Waters protections will protect the future of my business and those of other

farmers and ranchers that depend on clean water from the Upper Pecos Watershed to water their fields and livestock.

There are dozens of acequias that the Pecos River feeds — from the Pecos Canyon, all the way to Fort Sumner. Acequias are intricately tied to the health of rivers. If the Pecos River suffers, our acequias suffer and vice versa. When you have active acequias, the river flows on and beneath the land. When I flood irrigate, those shallow aquifers are getting recharged and they then feed back into the river. The water is going from the river onto my fields and through the ground and going back out into the river. If the river is polluted, it brings contamination onto my lands and into my fields impacting my business and my way of life.

In May of 2005, I was appointed to the Acequia Commission and I currently serve as the Chairman of the Commission. The Acequia Commission was created in 1987 to advise the Governor, the New Mexico Interstate Stream Commission, and the U.S. Army Corps of Engineers on the criteria that should be used to determine priorities for rehabilitating acequias under a new federal funding program. The Acequia Commission was established by statute by the 1993 Legislature as an eleven-member commission serving four-year terms. The Acequia Commission is charged with serving as a facilitator for communication between local acequia organizations and the state and federal governments, reviewing plans or legislation that affect acequias, and presenting their findings to the Governor and the New Mexico Interstate Stream Commission. Acequia agriculture is beneficial to the state and makes a significant contribution to New Mexico's economy. Counties with the highest number of acequias make up about 40% of the total farms in the state.[1] According to the New Mexico Acequia Association, there are about

[1] USDA 2012 Census of Agriculture. Counties include: Rio Arriba, Taos, Mora, Lincoln, San Miguel, San Juan, Cibola, Grant, Sandoval. Note that county-level data also includes other agriculture.

640 acequias systems in New Mexico. The Acequia Commission has taken on many issues that are detrimental to our traditional way of life, and the right to clean water remains a top priority among the acequia community. Acequias are essentially a responsive water management system for an entire community to interact with the landscape and their neighbors in way that is adaptable and responsive to current conditions. When it is a dry year, and there is less water, acequias provide a system to share and allocate water equitably, and during wet years the irrigated area can expand as water availability allows. Simply put, acequias provide a model for how we could, as a state, manage our water more equitably and sustainably in the future, and therefore, protecting acequias has a clear benefit to the state. In addition, protecting acequias is essential for maintaining the economic and cultural future of the state, and in-turn, protecting clean water is essential to protecting acequias. San Miguel County is considered by the New Mexico Acequia Association as one of the nine "acequia counties" in the state and has the second highest average market value produced per farm of those nine counties. The Pecos River is a major source of water for San Miguel County farms and protecting clean water in the Pecos River and its tributaries will benefit these farms immensely. In addition, protecting the water quality of the Pecos River headwaters will benefit many downstream communities and agricultural operations.

Acequias play an important role in providing food to our communities. Acequias maintain connections to our culture and history, recharge our aquifers, and provide habitat for plant life and ecosystems that are important for our luscious arid valleys. If it weren't for the extensions of the greenbelt that the acequias create, our valleys wouldn't be here. All this depends on clean water in the acequia — and, in-turn, throughout the watershed — to nourish our communities, lands, and wildlife. Acequias are an integral part of our landscape and they've

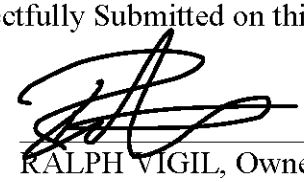
been here for hundreds of years. They run with the land and serve as the lifeblood of our communities. We have a saying: “El agua es vida” (“Water is life”). We can’t have clean water in our acequias without clean water in our rivers.

If the Upper Pecos Watershed isn’t healthy, we can’t get water to our acequias. That’s why I fight so hard for the work I do with acequias, because without clean water, we don’t have anything. Many things can be learned from acequia land use traditions. Most important is that, if we protect our water and our ability to grow food locally, we can become self-reliant as communities and self-sustaining as a state. Water used for agriculture nourishes our bodies and provides habitat for wildlife while filtering pollution and recharging the water table. Clean water benefits the fragile ecosystem that supports wildlife and people alike. Many people in traditional communities hunt and depend on wildlife for survival. Bees that pollinate our crops and food are dependent on water continuing to run through rivers and ditches. Our water should not be leveraged for short-term economic gain, but rather invested for long-term sustainability. Outstanding Water protections for the Upper Pecos Watershed is an example of protecting the long-term sustainability of the Pecos region. We must stand and fight to make sure that our water stays clean and connected to our lands.

Outstanding Waters protections for the Upper Pecos Watershed will protect and support traditional land uses, such as irrigating, farming, and ranching in the Pecos area. Many of my neighbors support these protections as a way to maintain clean water in the river so that we can continue to have clean water flowing in our acequias and clean water to sustain wildlife populations that we depend on for hunting. In addition, I appreciate that the state regulations governing ONRW designations do not add additional burdens on acequias. 20.6.4.8.A(3)(e) NMAC.

I see Outstanding Water protections as a way to protect my business by ensuring that the water stays clean and is not impacted from unwise land management practices such as out of control recreational and industrial impacts. At the same time, I see Outstanding Water protections as an opportunity to raise awareness about the need to engage in watershed restoration and education projects. In conclusion, as an acequia expert and small farmer, I see Outstanding Waters protections as critical for protecting the economic, cultural, and ecological health of the Upper Pecos Watershed, and the significant benefits that a clean and healthy watershed provides to the state and our local community.

Respectfully Submitted on this 10th day of March, 2021.



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PETITIONERS' EXHIBIT

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Ralph A. Vigil

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molinodelaisla@gmail.com

WORK EXPERIENCE

Owner/Farm Manager, Molino de la Isla Organics LLC, Pecos, NM 87552, March 2008 - Present

- planning finances and production to maintain farm progress against budget parameters;
- practical activities, e.g. driving tractors, operating machinery, feeding livestock, irrigating, harvesting, etc
- marketing the farm's products;
- buying supplies
- arranging the maintenance and repair of farm buildings, machinery, and equipment;
- planning activities for staff and volunteers mentoring and monitoring them;
- maintaining and monitoring the quality of yield, whether livestock or arable crops;
- understanding the implications of the weather and making contingency plans;
- making sure that products are ready for deadlines, such as deliveries and markets;
- ensuring that farm activities comply with government regulations;
- monitoring animal health and welfare;
- applying health and safety standards across the farm estate;
- monitoring and documenting all yields and land use to meet funding requirements;
- protecting the environment and maintaining biodiversity;
- keeping financial records up to date.

New Mexico Acequia Commission, Member, Santa Fe, NM, May 2005-Present

• Provide recommendations and assist the Governor, Legislature, Office of the State Engineer and Interstate Stream Commission and the United States Army Corps of Engineers in establishing acequia and community rehabilitation priorities and other acequia and community ditch matters.
• Serve as a facilitator for communication between acequia and community ditch associations and state and federal agencies.
• Review for Governor, Legislature, Secretary of Agriculture and the Interstate Stream Commission, and comment on, any plan or legislation affecting acequias or community ditches

Board of Directors, Upper Pecos Watershed Association (UPWA), 2007-2012

Utilize experience, communication and leadership skills, and personal and professional contacts, to support the primary goals of the UPWA as follows:

- Protect and improve the health of the Watershed
- Address significant ecological, and environmental issues in the Watershed
- Preserve traditional and cultural uses and benefit the local economy.

The UPWA is the Watershed's coordinator for all of the public and private entities with interests in the watershed; including the National Park Service, U. S. Forest Service, NM Department of the Environment, NM Department of Game and Fish, NM Departments of Parks, San Miguel County, Village of Pecos, advocacy groups, as well as the numerous private landowners in the watershed.

New Mexico Acequia Association, Real Estate Consultant, November 2008-April 2010

• Research and identify property owners along acequias in New Mexico, to create a legal document that will identify acequia easements and be recorded with the appropriate county, which in turn will update title searches during real estate transactions.
• Provide governance training on acequia easements to parciantes throughout the state.
• Provide non-legal advice to acequias dealing with Real Estate issues.
• Work with local, state, and federal governmental entities along with policymakers to help create policy that will protect acequia culture for generations to come.
• Create educational manuals that train acequias on real estate issues that can impact acequia communities.

New Mexico Acequia Commission, Chairman, Santa Fe, NM, September 2004-Present

• Provide recommendations and assist the Governor, Legislature, Office of the State Engineer and Interstate Stream Commission, and the United States Army Corps of Engineers in establishing acequia and community rehabilitation priorities and other acequia and community ditch matters.
• Serve as a facilitator for communication between acequia and community ditch associations and state and federal agencies.
• Review for Governor, Legislature, Secretary of Agriculture, and the Interstate Stream Commission, and comment on, any plan or legislation affecting acequias or community ditches

Sembrando Semillas Maestro, New Mexico Acequia Association, Santa Fe, NM, April 2008-2010

• Help to create and train a future generation of acequia farmers, ranchers, and community leaders.
• Help to facilitate agriculture and land-stewardship presentations, workshops, & experience in schools, farms, and other venues.

• Create, Implement and inspire resilient agricultural systems based on seed-saving, crop adaptation, and sound stewardship of the land, water, and biological resources in the landscape.
• Compare crops and cropping systems within and among fields in different areas.
• Document agricultural activities, knowledge, & traditions and create media for the conservation and expansion of agricultural consciousness.
• Help to create and train a future generation of farmers.
• Increase the area in cultivated land: more gardens, fields, and crops.
• Increase community and regional food security through the development of seed libraries that can also serve local food banks.

Associate Broker, Santa Fe Properties Santa Fe, NM, April 2002- December 2009

• Sold, for a fee, real estate owned by others.
• Obtained agreements from property owners to place properties for sale with real estate firms.
• Monitored fulfillment of purchase contract terms to ensure that they are handled in a timely manner.
• Compared a property with similar properties that have recently sold, in order to determine its competitive market price.
• Acted as an intermediary in negotiations between buyers and sellers over property prices and settlement details, and during the closing of sales.
• Maintained knowledge of real estate law, local economies, fair housing laws, and types of available mortgages, financing options and government programs.
• Checked work completed by loan officers, attorneys, and other professionals to ensure that it is performed properly.
• Arranged for the financing of property purchases.
•Appraised property values, assessing income potential when relevant.
• Maintained awareness of current income tax regulations, local zoning, building and tax laws, and growth possibilities of the area where a property is located.
• Arranged for title searches of properties being sold.
• Maintained a sales volume of $4,000,000 or better per year.

Senior Appraiser, Santa Fe County Assessors Office, Santa Fe County, NM, May 1999-April 2002

• Collected, analyzed, and interpreted market and cost trends.
• Valued individual residential and commercial properties for property tax purposes in conformance with professional standards of the International Association of Assessing Officers and the laws of the State of New Mexico.
• Applied state laws that exempt certain properties and also allow for lower values for long-term residential property owners.

• Report to the property owner the value of his property through the Notice of Value in April annually.
• Defended the value placed on the property at the Valuation Protest Board in
District Court.
• Supervised five field auditors and two clerks.

EDUCATION

2001 Dearborn Real Estate Institute — Albuquerque, NM
New Mexico Licensed Real Estate Broker

2001 International Association of Assessing Officers — Socorro, NM
New Mexico Certified Appraiser

2000 Santa Fe Community College — Santa Fe, NM
New Mexico Registered Appraiser

1996 Pecos High School — Pecos, NM

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY NORMAN MAKTIMA

I. INTRODUCTION & SUMMARY

I am Norman Maktima, senior guide at High Desert Angler in Santa Fe, New Mexico. I am from the Pueblos of San Felipe, Laguna and Hopi. However, I grew up and lived 38 out my 40 years in the Upper Pecos River Valley. My life has been shaped by fishing, hunting and camping along the Pecos River, its tributaries, and in the surrounding mountains. The Pecos River is where I established myself as a fly fishing guide and competing team member of Fly Fishing Team USA. As a member of Fly Fishing Team USA, I competed in 10 World Fly Fishing Championships, most hosted in Europe. I have experienced some amazing places and waters to fly fish in all of my travels. However, I consider it a blessing to return to my home waters — the Upper Pecos Watershed — to fish in a healthy river ecosystem. As a guide, I have the privilege of introducing the Upper Pecos River and its tributaries to clients from around the world. I have guided individuals of all skill levels and travel experience; and they all share the same gratitude and appreciation experiencing a river as beautiful as the Pecos. The protection of

the Upper Pecos Watershed under the Outstanding National Resource Waters ("ONRW" or "Outstanding Waters") designation, is crucial to supporting New Mexico's outdoor industry and recreational economy, as well as our local businesses, public health, cultures and communities in the Pecos region. My testimony addresses section 20.6.4.9.B(2) NMAC, demonstrating that, in my expert opinion, the nominated waters of the Upper Pecos Watershed meet the criteria of having exceptional recreational or ecological significance; and section 20.6.4.9.B NMAC, demonstrating that, in my expert opinion, designation of the nominated waters of the Upper Pecos Watershed as Outstanding Waters will be beneficial to the State of New Mexico.

II. MY EXPERIENCE AS A GUIDE ON THE UPPER PECOS AND THE CULTURAL AND ECOLOGICAL SIGNIFICANCE OF THE WATERSHED

I have guided and worked for High Desert Angler for roughly 22 years. High Desert Angler is one of two fly shops in the Santa Fe area. My resume is Petitioners' Exhibit X. We are a retail shop, as well as a guide service. There are also a handful of other fly fishing guide services that work on the Pecos River. High Desert Angler typically employs 5 to 7 guides during the peak tourist season. Santa Fe serves as the primary destination drawing tourists for the unique food, art, and cultural experiences the city provides. Many of these visitors look to add an outdoor experience to their trip as well. In the years I have guided, I have developed a long list of return clients. These returning clients, in-turn, bring or recommend family and friends to share in the same fly fishing experience with me as their guide. Also, local residents support us by shopping and booking trips and classes with High Desert Angler. The same holds true for guides from other fly shops and guide services on the Pecos River.

The key draw to fishing the Pecos River and its tributaries is the variety of water types and ecosystems you can experience there. From pinion / juniper forest with low gradient stream flows, to spruce / fir forests with narrow, steeper gradient stream flows. This variety is great for a

guide, because you can take clients to a section of river that will accommodate their skill level or give them the experience they want to have. I cannot say I have a "favorite" spot to take clients or fish myself, because as you move up- or down- river, the Pecos morphs and behaves like a different river at every turn. This spectrum of ecosystems benefits the biodiversity within the entire watershed. Specifically, for a fly fisher, you have varying species of aquatic insects that require certain levels of quality of water in order to thrive. These aquatic insects, in-turn, are the food source of the trout that we pursue in the Pecos River and its tributaries. Currently, the Pecos River's health is demonstrated by being home to species within the five main orders of aquatic insects: caddis, mayflies, stoneflies, midges and dragon / damsel flies. Many of these species are indicator species, which help us evaluate the health and quality of the river. The presence of these key aquatic insects throughout the Upper Pecos River and its tributaries speaks to the exceptional water quality and health of the Upper Pecos Watershed.

Rich biodiversity does not only occur within the mainstem of the Pecos River, but throughout the entire Upper Pecos Watershed. The Watershed is home to an abundance of wildlife and unique flora. On countless trips, clients and I have been able to see deer, elk and an occasional Bighorn sheep while fishing here. As well as a variety of migratory and resident song birds, hawks / eagles, wading birds and other birds that benefit from the ecological significance provided by the Upper Pecos Watershed. The vibrance of the Upper Pecos River Valley is enriched by the variety of flowers and plants that grow along the river and its tributaries. There is also a wide range of traditional medicinal plants and edible plants that are dependent on the high water quality of the Upper Pecos River and its surrounding waters. This ecological richness requires the consistent and clean source of water that the Upper Pecos River and its tributaries provide.

I often brag to my clients and visitors to New Mexico that you can travel an hour in any direction and be in a totally different environment. That environmental diversity can be seen within the Upper Pecos River Valley and Canyon: from the headwaters emerging from the Sangre de Cristo Mountains at elevations of over 12,000 feet, to the red-rock mesas surrounding the communities further downstream.

The Pecos River has also given this region its history. From the era of pre-Spanish contact, the Pecos Pueblo, Comanche, Ute, and Apaches lived and relied on the natural resources in the area and often interacted, either under peace or under aggression. This created a major hub for trade and served as a gateway between the plains and fertile valleys of the Pecos and Rio Grande. The Pecos Pueblo and its culture evolved and depended on the Pecos watershed for its agriculture, abundant game, and significant religious landmarks. This gave the Pueblo people the resources to create a commerce with the peoples of the region. Within Pueblo culture, water is recognized as our mother, as she has given and allowed life to thrive, we do not forget that. Even though the people of the Pecos Pueblo were forced to abandon, their descendants still recognize and maintain their ties to those culturally significant landmarks.

The Spanish community of Pecos has become dependent on the Upper Pecos Watershed's resources to sustain their agricultural practices, including farming and ranching cattle. Battles from the Civil War era that took place in the area finalized the status of the nation. Now, we are seeing people from across the globe coming here to experience what I just described — some staying and becoming a part of the community. The ability to share all of these aspects with my clients, along with my personal experiences and stories, shows how culturally, recreationally, and ecologically significant this place really is.

The Upper Pecos Watershed holds a vast and amazing array of characteristics, history, people, ecosystems and opportunity. ONRW designation will ensure that water quality will be protected to benefit and sustain this ecosystem, community, and economy for both current and future generations.

III. RECREATIONAL SIGNIFICANCE OF THE UPPER PECOS WATERSHED

As I mentioned before, my livelihood depends on the health of the Pecos River and the Upper Pecos Watershed as a whole. However, the angling community is not the only group concerned with the health of the river. The Upper Pecos Watershed also benefits the broader Santa Fe and San Miguel County outdoor industries. Other guiding services and outfitters depend on a healthy watershed to sustain their businesses as well. These include hiking, biking, and hunting guides and businesses. The outdoor industry benefits from those going to the Upper Pecos Watershed to recreate, because they are consumers of local products and services that support their outdoor adventures.

The recreational community relies on the Upper Pecos Watershed's overall health. I have seen trailheads, open spaces, and scenic Highway 64 along the Pecos River, being used by so many. Especially with Covid-related restrictions on businesses in Santa Fe over the past year, the Upper Pecos Watershed served as many people's escape and gave them the ability to enjoy the outdoors and the region's natural beauty while also abiding by safe social distancing practices. People venture out to the Pecos River and its tributaries to camp, picnic, swim, and just take a scenic drive to soak in the views. As Covid-related restrictions are lifting and businesses are opening back up, the recreationists traveling to the Pecos are stopping at local businesses and restaurants once again, supporting the local economy. Along with that, the Pecos National Historical Monument has seen the benefit of the Upper Pecos' exceptionally healthy watershed

as well. Their fishing program has been greatly appreciated by anglers, like me. This has brought more visitors and business to the Monument and to the region.

The designation of the Upper Pecos Watershed as Outstanding Waters will ensure water quality that supports a healthy river ecosystem is maintained presently and in the future. ONRW designation will help to prevent actions that degrade the health of the Upper Pecos Watershed. A healthy watershed influences more than water recreation and obvious users like me. The effects of a degraded watershed necessarily cascade downstream to negatively influence local communities, businesses, culture and a sustainable way of life. Not just in Pecos, but in the tourist economy surrounding Santa Fe also. Actions that degrade the watershed's health decimate the river community and the riparian community, and diminishes the value of farms and agriculture that depend on high water quality. Absent ONRW protection, the Upper Pecos Watershed could face actions that will pollute and degrade water quality, which in-turn, will reduce and negatively impact recreational users and tourist support and contributions to the local economy as well. In my expert opinion as a fly fishing guide and longstanding member of the local community in Pecos, the designation of the waters of the Upper Pecos Watershed as Outstanding Waters will allow the Upper Pecos to remain healthy and ecologically and recreationally significant, along with all the communities that are supported by her waters, now and far into the future.

IV. CONCLUSION

Growing up on the Pecos River, I have so many memories and stories. However, not all are good. I remember when the old Terrero Mine tailings and shafts were still exposed, allowing contaminants and heavy metals to effect the Pecos River and Willow Creek. Then, the in the early 1990's, we experienced catastrophic runoff events, in which contaminants from the old

mine entered the waters at toxic levels and killed the river‘s aquatic life and inhabitants downstream. More recently, drought occurrences show how dependent and vulnerable we are when water becomes scarce. Higher level fire restrictions reduce the economic flow into the area. A contaminated and polluted river, I fear, would do the same. After the superfund cleanup of the old Terrero Mine was implemented, it took many years to see the health of the river rebound. This history shows us the critical importance of taking steps to protect our precious water resources now, and to prevent such harms as experienced in the past from ever happening again.

That said, I have had many great memories from my childhood growing up on the Pecos River. Also, I have great recent memories sharing my knowledge and history about the Pecos River with my family, friends, and clients. This river and its watershed have shaped and lead my life’s path to amazing places and experiences. I am not the only one it has affected and impacted, nor should I or you be the last. Protecting this life force is critical in preserving our culture, history and way of life as New Mexicans.

There is no doubt that the Upper Pecos Watershed hold exceptional recreational and ecological significance, and its designation as an Outstanding Water would translate into immense benefits to the local community and to the State of New Mexico. Based on my expertise as a fly fishing guide and longstanding member of the local community, I respectfully request that the Commission support the nomination of the waters of the Upper Pecos Watershed as Outstanding National Resource Waters, thereby protecting these essential waters from degradation presently and in the future.

Respectfully submitted on this 10th day of March, 2021.

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PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY ROBERT SIVINSKI

I. INTRODUCTION AND QUALIFICATIONS

Thank you for the opportunity to present technical testimony on behalf of Petitioners in support of the proposed designation of the waters of the Upper Pecos Watershed as Outstanding National Resource Waters ("ONRWs" or "Outstanding Waters"). My name is Robert C. Sivinski and I reside in Santa Fe, New Mexico. I am the sole proprietor of RCS Southwest Consulting, a biological consulting service. Prior to that, I was employed for 27 years by the New Mexico Energy, Minerals and Natural Resources Department as a Botanist and Land Conservation Programs Manager. My formal education includes a B.S. and M.S. in Wildlife Biology from New Mexico State University, and additional graduate study in botany at the University of New Mexico ("UNM"). I continue to maintain that academic connection as a Curatorial Associate (Adjunct Faculty) with the Museum of Southwestern Biology in the UNM Biology Department. My relevant experience as a government biologist and private consultant includes extensive surveys and recovery efforts for endangered plant species in the Upper Pecos Watershed and

wetland delineations and spring assessments in the Sangre de Cristo Mountains for the Carson National Forest and New Mexico Department of Transportation. I am also the author of a statewide inventory of arid-land spring ciénegas and a Wetland Action Plan for their conservation for the New Mexico Environment Department, Surface Water Quality Bureau. My resume is Petitioners' Exhibit 14.

My testimony will 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.

II. SIGNIFICANT ECOLOGICAL ASPECTS OF THE UPPER PECOS WATERSHED

Family campouts and long backpacking trips in the wilderness exposed me to the ecology of the Upper Pecos Watershed at an early age. The first fish I caught on a fly rod 50 years ago was a Rio Grande cutthroat trout in Jack's Creek, which can illustrate the connections between biological species in the Pecos River and its tributaries. These cold, well oxygenated waters produce a great variety and abundance of macroinvertebrates, such as caddisflies, stoneflies, mayflies and midges that are the primary foods of cutthroat trout. While fishing, I also frequently saw the American dipper, a small bird that wades and dives in the riffles and pools of these streams for larvae of the same invertebrates.

While these waters are biologically diverse and productive, so is the riparian zone along them. These valleys and side drainage bottoms with their wet soils and shallow alluvial aquifers support greater vegetative productivity than the drier hillsides and ridges. A profusion of herbaceous plants and leafy shrubs and trees such as narrowleaf cottonwood (*Populus angustifolia*), Bebb's willow (*Salix bebbiana*), thinleaf alder (*Alnus incana* ssp. *tenuifolia*) and boxelder maple (*Acer negundo*) are forage for a great variety of moths, butterflies, beetles,

grasshoppers, and other insects. Combining these with the aquatic insects that fly as adults, these riparian bottoms become the primary habitats for the terrestrial predators that hunt them. Insectivorous birds such as swallows, flycatchers and warblers are drawn to riparian habitats, especially during migration. Shrews have a diet of invertebrates and are primarily associated with riparian habitats in New Mexico (Frey and Yates 1996). Many bat species spend more time foraging in riparian areas than drier uplands (Seidman and Zabel 2001). Most amphibians such as leopard and chorus frogs must spend their entire lives in these wetlands for their water requirements and access to abundant arthropod prey (Degenhart et al. 1995). Invertebrates and their predators comprise the most direct links between freshwater aquatic and terrestrial ecology. This is why 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).

The dense and varied vegetation of riparian valleys in the Upper Pecos Watershed also support a great variety of vertebrate herbivores that are the primary consumers of abundant plant tissues, fruits and seeds. These birds and mammals are in turn preyed upon by omnivorous bears and coyotes and carnivorous bobcats, mountain lions, and birds of prey.

Riparian woodland and wetland areas also provide important structural and spatial habitat diversity with complex layers of deciduous trees, shrubs and herbaceous strata for nesting, escape, roosting and thermal cover. Perennial 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. In the arid Southwest, about 80 percent of all animals use riparian resources and habitats at some season or life stage, and more

than 50 percent of breeding bird species nest chiefly in riparian habitats (Krueper 1993). 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. This is 78 percent of the total 603 species in those three counties.

III. SPECIES DIVERSITY IN THE UPPER PECOS WATERSHED

For me the most iconic Upper Pecos species are the Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*), Rio Grande cutthroat trout (*Oncorhynchus clarkii* ssp. *virginalis*), and Mexican spotted owl (*Strix occidentalis* ssp. *lucida*) because of the efforts and publicity directed to their conservation. The Holy Ghost ipomopsis grows along the lower 1.5 miles of Holy Ghost Canyon where its pink flowers grace the roadside. It naturally occurs nowhere else in the world and is listed as an endangered species by the U.S. Fish and Wildlife Service and the State of New Mexico. It is not a riparian plant, but needs to be near the canyon bottom where the humidity is greater. Three 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. Two more rare plants are endemic to the Upper Pecos and occur nowhere else in the world. The Pecos fleabane (*Erigeron subglaber*) grows only on the summit of Elk Mountain and a little further north along that ridge. A yellow-flowered variety of Gunnison's mariposa lily (*Calochortus gunnisoni* var. *perpulcher*) (a.k.a. Pecos mariposa lily) grows in the meadows and aspen glades of the Grass Mountain ridge north into Mora County. These two are not wetland plants or endangered species (yet), but are unique floristic elements of the Upper Pecos (NM Rare Plants website).

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. Two more rare plant species, wood lily (*Lilium philadelphicum*), and yellow lady's slipper orchid (*Cypripedium parviflorum*), are listed as endangered by the State of New Mexico because of their rarity in this state and collectability. Both are most often found in New Mexico in the valley bottoms and ephemeral drainages of the Upper Pecos Watershed (NM Rare Plants website). The New Mexico Rare Plant 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.

As the southern terminus of the Rocky Mountains, the Upper Pecos sometimes marks the southern range extreme of plants that occupy montane wetlands into Colorado or as far north as Alaska. Wetland plants like Rocky Mountain lousewort (*Pedicularis sudetica*), Eastwood's Woodroot (*Podistera eastwoodiae*) and Parry's rush (*Juncus parryi*) are just a few of the species that would not even occur in New Mexico except for the tributary streams and wet meadows of the southern Sangre de Cristo Mountains (Allred 2020; SEINet).

The 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. The remnant populations in these tiny creeks are very susceptible to extirpation from severe drought or suffocating ash flows in the floods

following forest fires, events that will become more severe in intensity and duration with climate change (EPA). Downstream connectivity with cutthroat trout in other creeks has been broken so reintroduction and recovery of local extirpations must now rely on human intervention. There were 11 cutthroat populations in the headwaters of the Pecos River in 2016, which was 8.5 percent of the total 129 populations in the Colorado and New Mexico range of this native trout (Bakevich et al. 2019).

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. These economically important trout also feed on invertebrates that need cold and clean stream habitats.

Birds are the most diverse and abundant vertebrate animals in the Upper Pecos. 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. 168 of these are present as breeding adults (nesting). Several of these birds are identified by the New Mexico Department of Game and Fish as Species of Greatest Conservation Need (Appendix D of this Petition). One rare raptor, Mexican spotted owl, is listed as threatened by the U.S. Fish and Wildlife Service as a threatened species and two segments of its designated critical habitat (Segments SRM-NM-5a and 5b) cover much of the Santa Fe National Forest uplands and tributaries in the Upper Pecos Watershed (USFWS Region2) where riparian communities along

perennial and ephemeral streams are important spotted owl habitat (BISON-M). The northern goshawk (*Accipiter gentilis*, USFS sensitive species) and peregrine falcon (*Falco peregrinus*, NM threatened species) are additional species of concern in the Upper Pecos Watershed that also utilize the riparian habitats (Degraaf, R. 1991).

Of all the mammalian wildlife in the Upper Pecos, the American beaver (*Castor canadensis*) has the greatest influence on hydrology and riparian ecology and is a keystone species in the Upper Pecos River and its tributaries. Beaver 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). Retention of water saturates the valley soil expanding habitat for a variety of obligate wetland plants and killing riparian conifers such as blue spruce, which provides snags for cavity nesting birds.

BISON-M identifies 103 mammal species in the Upper Pecos counties of San Miguel, Santa Fe, and Mora. Almost all of these (99) use perennial cold water streams, montane riparian forest or ephemeral stream riparian habitats for at least part of their habitat requirements (BISON-M). One of the many bat species using these riparian habitats is the rare spotted bat (*Euderma maculatum*), which is a Species of Greatest Conservation Need for the New Mexico Department of Game and Fish. Both 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.

IV. SPRINGS AND EPHEMERAL OR INTERMITTANT STREAMS ARE ECOLOGICALLY NECESSARY

U.S. Geological Survey maps of the Upper Pecos identify only four geologic springs in the watershed, but there are actually many more surface expressions of the groundwater aquifers that contribute to the perennial stream flows in this region. Sloping wet meadows (fens or helocrene springs) are not uncommon in the headwaters, especially Winsor Creek, and unmapped hillside seeps and springs are scattered throughout. It is the relative permanence of these spring features that make these habitats biologically important. Springs and sloping seeps are most abundant in the very top of stream headwaters or in small drainages and slopes above streams where they are protected from the scouring floods that frequently modify river channels and floodplains. Spring flows may vary over time during wet and drought cycles of the climate, but are often less susceptible to fire and flood devastation or drying in prolonged drought and so remain reservoirs of wetland plant and animal diversity (Sivinski and Tonne 2011).

Seasonal 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. Small streams differ widely in seasonal, physical, chemical, and biotic attributes, thus providing habitats for a range of unique species. For instance, Jacobi and Cary (1996) studied 10 species of winter-emerging stoneflies in small New Mexico streams that are seasonally dry for long periods. Adaptations for life under these conditions include small size, rapid development, and a period of diapause during egg or larval stages. Ephemeral stream wildlife includes permanent residents as well as migrants that travel to headwaters at particular seasons or life stages. Movement by migrants links headwaters with downstream and terrestrial ecosystems, including exports such as emerging and drifting

insects (Meyer et al 2007). 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. This is 83 percent of the total 532 vertebrate species in those three counties.

Ephemeral and intermittent stream channels provide important wildlife movement corridors because they contain continuous chains of riparian vegetation that wildlife can utilize for cover, food and sometimes water. These habitat corridors are not only extensions of the riparian ecosystem; they provide access to large blocks of upland habitats that are seasonally useful to resident and migratory wildlife (Bennett 1999). The loss of a population of a wetland plant or animal, either upstream or downstream, may be more quickly reestablished via small stream corridors than in isolated patches of habitat that lack proximity to riparian corridors. Springs, 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. Given the significant ecological aspects of the Upper Pecos watershed, along with the high species diversity, the importance of springs and wetlands present in the watershed, and the uniqueness of the watershed, I strongly support the designation of the waters of the Upper Pecos Watershed — including all perennial, intermittent, and ephemeral streams and wetlands (whether named or unnamed) extending from the mainstem of the Pecos River at the U.S. Forest Service Dalton Fishing/Day Use Site upstream to their headwaters or to the Pecos Wilderness boundary (whichever comes first) — as Outstanding Waters, thereby preventing these waters from any further degradation (with limited exceptions).

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Respectfully submitted on this 10th day of March, 2021.

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PETITIONERS' EXHIBIT

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Robert Sivinski, Botanist/Biologist

EDUCATION: BS, MS, Wildlife Biology, New Mexico State University (1977, 1979) **I CERTIFICATION:** US Army Corps of Engineers 40-Hour Wetlands Course **I YEARS OF EXPERIENCE:** 40 Total

Robert (Bob) Sivinski is a biologist with 40 years of experience in botany and land conservation. Bob's extensive experience includes botanical and biological inventories, threatened and endangered plant species research and recovery, habitat restoration, range management, mine reclamation, and conservation easement acquisitions. He routinely performs floristic and plant taxonomy studies, vegetation monitoring studies, threatened and endangered plant surveys, critical habitat delineations, wetland delineations, baseline inventories for conservation easements, and noxious weed inventories. Bob's broad experience and specialized skills make him an invaluable asset to any field-based project. Bob would serve as a team member for natural resource inventories, especially vegetative and wetland inventories.

RELEVANT PROJECT EXPERIENCE

As the Rare and Endangered Species Botanist for the New Mexico Energy, Minerals and Natural Resources Department, Bob coordinated and conducted research and recovery efforts for the endangered Holy Ghost ipomopsis in the upper Pecos watershed from 1989 - 2011. Other relevant wetlands experience includes:

Coyote Creek Wetlands Mitigation Assessment, Mora County, NM (2020) Made wetlands delineations on lands purchased by NM DOT in the Coyote Creek valley for a wetland habitat mitigation bank.

Spring Inventory and Assessment in the McGaffey Unit of the Carson National Forest, Taos County, NM (2019) Assessed plant species, condition and threats, and mapped wetland extent at 9 springs and groundwater seeps USFS inventory and management.

Wetland Action Plan for New Mexico Arid-land Spring Ciénegas (2018) Developed a Wetland Action Plan for the NM Environment Department on wet meadow (ciénega) wetlands at springs and groundwater seeps in arid and semiarid regions throughout the state. Included a statewide inventory of cienéga wetlands with aerial imagery and literature searches, landowner identification and educational outreach to cienéga owners and wetland managers with workshops, reports, and management recommendations.

Leonora Curtin Wetland Preserve Restoration, La Ciénega, NM (2018) Helped the Santa Botanical Garden and Institute of Applied Ecology acquire, plan and implement a USFS Invasive Plant Management grant to remove and control Russian olive and other noxious weeds on this public wetland preserve.

Wetland Plant Identification Workshops, New Mexico (2016, 2018) Organized and instructed three-day workshops on wetland plant Identification for personnel and cooperators in the Army Corps of Engineers (Albuquerque Office) and NM Environment Department. Included assembling a field guide to 100 common wetland plants in NM.

Wetland Delineation and Endangered Plant Survey, Santa Rosa, NM (2016) Delineated wetlands and extent of invasive non-native plants along El Rito adjacent to Park Lake for weed control and extension of paved sidewalks. Located occurrences of endangered Pecos sunflower and Wright's marsh thistle.

Riparian Assessment of the Santa Fe River Box, Santa Fe County, NM (2013) Conducted an assessment of riparian vegetation on the BLM portion of the Santa Fe River. Survey included establishing permanent vegetation monitoring transects to assess vegetation cover and woody stem density, and identifying all native and exotic plant species.

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TESTIMONY IN SUPPORT OF PETITION BY KURT MORA

I. INTRODUCTION AND QUALIFICATIONS

Dear Commissioners,

Good afternoon, my name is Kurt Mora. I serve as the 2nd Lt. Governor of Jemez Pueblo. The Pueblo of Jemez has spiritual and cultural connections to the Pecos area as our Pecos ancestors lived in this area since 1200. In 1838, the Pecos people migrated to Jemez Pueblo, and with this migration The Pecos Pueblo was merged with Jemez Pueblo by an Act of Congress in the 1930's. Along with the migration, The Pecos People brought their Governor cane, at which time Jemez Pueblo placed this cane with our secular leadership, instilling the 2nd Lt. Governor of Jemez Pueblo.

Consequently, I am speaking here today on behalf of our Jemez and Pecos Peoples to communicate our support for the protection of the Upper Pecos Watershed as an Outstanding National Resource Waters (ONRW). Pecos Pueblo, which translates to "the place above the water", is an ancestral pueblo for Pecos descendants who currently live at The Pueblo of Jemez.

The Pueblo feels strongly about the need for protecting this pristine water resource. This stretch of the Pecos River is the lifeblood of our people, and the ecosystems that are connected to this special place on our Pecos ancestral homeland is too precious not to conserve for future generations

II. TESTIMONY

Our Pecos ancestors called the Pecos River *Toqqk'ô P'oeoegee* which can be interpreted as Corn Cob River because its waters sustained the people and the corn that was planted by them up and down the Pecos River Valley or as we call it *Tqqk'ô P'oqoqwâamu*, Corn Cob River Valley.

Today, the descendants of the Pecos continue to visit the sacred shrines on the Pecos ancestral homeland including the upper Pecos Watershed and perform ceremonies using the sacred waters of the Pecos River. We as Jemez people see the sacredness of the water ecosystems that sustain life to all the birds and animals, plants and the aquatic life that humans greatly benefit from.

The waterways are our trail-ways and are part of our migratory stories. Clean water and the connectedness of water, land, and people, is critical and vital for our health and wellbeing. To ensure the wellbeing of future generations of peoples that connect themselves to the Pecos River, Jemez Pueblo and the descendants of Pecos Pueblo enthusiastically support designating the Upper Pecos watershed as an Outstanding Nation Resource Water (ONRW).

In closing, please accept The Pueblo of Jemez and the descendants of Pecos Pueblo's full support for this petition. May your efforts and the efforts of your colleagues be blessed by Our Creator and may your lives be enriched with love and peace.

Respectfully Submitted on this 10th day of March, 2021.

Kurt Mora, 2nd Lt. Governor
Pueblo of Jemez
P.O. Box 100
Jemez Pueblo, NM 87024
(575) 834-7331
Kurt.Mora@jemezpueblo.org

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

NON-TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY JANICE VARELA

I. INTRODUCTION

My name is Janice Varela, and I am a lifelong resident of Pecos, New Mexico. My resume is Petitioners' Exhibit 17. My testimony will address section 20.6.4.9.B NMAC, demonstrating that designation of the waters of the Upper Pecos Watershed as ONRWs will benefit the State of New Mexico.

I am the San Miguel County Commissioner representing District 2. I currently serve as Vice-Chair of the San Miguel County Commission. This is my first year in my second term. I won both elections by a landslide. The people of my district elected me because of my history and commitment to protecting land and water, the Pecos River, and the Upper Pecos Watershed. I work tirelessly with my community in taking action to protect water, including water rights. My hope is to improve our local economies by promoting our natural resources and recreational opportunities. By enacting protection of water quality, such as by designating the Upper Pecos Watershed as an Outstanding National Resource Water ("ONRW" or "Outstanding Water"), it

will ensure that we have a sustainable future so that our river can thrive. As a planning and zoning commissioner prior, I have advocated for protection of land use, waste management and planning.

II. ABOUT SAN MIGUEL COUNTY

San Miguel County, New Mexico was founded in 1852, named for San Miguel del Vado, and is comprised of a total land mass of 4,736 square miles, of which 4,716 square miles is land and 20 square miles is water. The Pecos River has its origin in the Pecos high country and the Gallinas River is a main tributary. Both rivers support life throughout this high-desert county. These rivers and the surrounding watershed provide water for agriculture, farming, and ranching, which has been a mainstay industry in the County since its inception. According to the U.S. Census, the population of the County was estimated to be 27,277 in July of 2019. Nearly 80 percent of residents in San Miguel County identify as Hispanic. The median household income in 2019 was $30,946, with about 24 percent of our residents living in poverty.

Many of our residents have been in Pecos and San Miguel County for their entire lives, and for many generations. Pecos is more than a pretty place, it is our home, and unlike many people that I have encountered who have worked and moved from coast to coast, we cannot imagine living any place else. Neighbors take care of each other and many families still live together in extended households.

III. THE IMPORTANCE OF THE UPPER PECOS WATERSHED TO THE COUNTY'S LOCAL RESIDENTS, VISITORS, AND ECONOMIC HEALTH

Natural resources and their protection are critical for our people and wildlife, and are essential for continuation of our cultural farming and ranching practices. National protected areas in our County include: the Las Vegas National Wildlife Refuge, Pecos National Historical Park, and the Santa Fe National Forest. Our National Forest lands offer a plethora of opportunity to

many recreationists, hunters, anglers and hikers. We are home to the Pecos Wilderness and a Wild and Scenic section of the Pecos River. Our region provides over 100-miles of high-quality cold-water fishing. Holy Ghost Canyon in the Pecos is the only place on planet earth where that the endangered flower, Holy Ghost Ipomosis, grows. We are home to the federally protected Mexican Spotted Owl and native Rio Grande cutthroat trout. The Pecos River, and the Upper Pecos Watershed as a whole, hold special significance to the natives who have lived in Pecos all of their lives. Many residents rely on wildlife and fish to feed their families and proudly pass these hunting and fishing traditions on to the next generation. Culinary treasures abound in our forest as well; we gather herbs and medicine to heal ourselves. Piñon gathering and gathering of wild foods are still practiced and very important to our people and cultural survival.

IV. DESIGNATION OF THE WATERS OF THE UPPER PECOS WATERSHED IS WARRANTED AND WOULD BENEFIT THE COUNTY AND THE STATE

Without water, we cannot live. The saying goes: "*El auga es vida*, water is life." No person or species can live without it. Our Pueblo ancestors moved here from places such as Chaco and Mesa Verde and other sites, no longer suited to sustain life without water.

In November 2019, I presented a resolution for adoption by the San Miguel County Commission stating our support for obtaining Outstanding Waters designation for our local river and its tributaries, the Upper Pecos Watershed. The resolution passed unanimously without controversy. My fellow Commissioners also recognize the importance of water and ensuring this vital local resource of ours is duly protected.

Designation of the waters of the Upper Pecos Watershed as an Outstanding Water will benefit our community by protecting the precious, high-quality water resources that are so important for recreational, agricultural, and economic activities for our residents and visitors

alike. Our local economy is dependent on the health of our river, and Outstanding Waters protections will help our local economy and communities to thrive both now and into the future.

V. CONCLUSION

Growing up in the Pecos was a gift that has shaped who I am as a person and who I am as a community leader. My gift was being able to enjoy nature, swimming, fishing, camping, and gathering herbs and berries with my family. My wish is that this continues. My new role as grandmother is to share these gifts with my grandchildren and teach them the lessons that I learned in the woods. My father and his father were well-known fly anglers and considered the best in the village. My father's last words on his deathbed were "teach the boy to fish".

I support the designation of the waters of the Upper Pecos Watershed as Outstanding National Resource Waters and respectfully request that the Water Quality Control Commission grant Petitioners' request to designate the Upper Pecos Watershed as Outstanding Waters.

Respectfully submitted on this 10th day of March, 2021.

JANICE VARELA, Commissioner
SAN MIGUEL COUNTY COMMISSION, DIST. 2
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PETITIONERS' EXHIBIT

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Janice Varela
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PROGRAM DIRECTOR SPECIALIZING IN LAND & WATER CONSERVATION

Program Strategy Development & Implementation ▪ Relationship Cultivation ▪ Leadership & Mentor Direction

Notable Accomplishments

- Elected in 2016 as San Miguel County Commissioner, Vice Chair 2018.
- New Mexico Association of Counties Board of Directors, elected in 2017-2019.
- Appointed to serve as Secretary on San Miguel County Planning and Zoning Commission in 2016 and served as a Commissioner since 2011 - 2016.
- Spearhead acequia community outreach throughout New Mexico and educated officials on compliance through facilitating regional and statewide meetings related to water rights and governance resulting in protection of community water rights.
- Research and assistance to legal team and elected acequia officials in defense of water rights in Pecos River adjudication lawsuit resulting in recognition and retention of water rights.
- Developed and delivered mining reform activity testimony at hearings and educated federal, congressional and state policy makers with legal amendment impact that resulted in New Mexico Mining Law in 1993.
- Partnered with environmental justice organizations and managed reporting and logistics to support Environmental Justice Listening Session that resulted in *A Report on Environmental Justice in New Mexico.*

Professional Experience

Luna Community College **Las Vegas, NM**

STEM Advisor ***02/2018-present***

- Provide one on one student guidance and advisement on topics including regular degree audits, individual tutoring referrals, and completion goals.
- Assist in planning and implementation of student recruitment, retention, and placement efforts.
- Participate in assigned committees and in professional development.
- Collaborate with faculty and instructors to create and maintain a supportive and balanced system of academic instruction to ensure program goals.
- Assist students in completion of admissions and enrollment into LLC.
- Provide students information in reference to student support, including tutoring, study skills, note taking and other relevant services.
- Conduct ongoing research to maintain currency in designated field(s) of STEM.

New Mexico State Legislature House of Representatives **Santa Fe, NM**

Legislative Assistant ***01/2018 -02/2018***

- Assisted members of the House of Representatives and staff in processing Capital Outlay Requests, proposed legislation and addressing public needs.
- Acted as liaison between public and members.
- Responsible for constituent services including preparation and mailing of letters and all correspondence.
- Researched issues, educated legislators and the public.

New Mexico Acequia Commission **Santa Fe, NM**

Technical Consultant/Education Specialist ***03/2016 – 5/31/17***

- Analyzed infrastructure projects and recommended funding distribution to local acequias that achieved project funding initiatives and supported Infrastructure Capital Improvement Plan processes.
- Delivered U.S. Forest planned resolution correspondence and managed communications processes that effectively supported acequia community involvement in local Forest Service planning activities.
- Developed policy recommendations on water transfers and processed communications for state agencies that successfully communicated with communities.
- Prepared monthly activity reports utilizing Excel and Word and submitted data that effectively addressed community issues.

- Built and cultivated internal and external relationships and educated organizations and government agencies with statutory role and initiatives that increased community awareness and participation with NMAC meeting initiatives.
- Collaborated with Interstate Stream Commission and analyzed and recommended draft changes to ensure Regional Water Planning Efforts in the Jemez y Sangre and Mora, San Miguel, Guadalupe Regions initiatives are fully achieved.

New Mexico Acequia Association **Santa Fe, NM**

Governance Education Specialist ***01/2005 – 07/2015***

- Mentored, coached and directed team of up to 3 Specialists and created bylaws, infrastructure planning and legislative capital requests that resulted in self-reliance and stronger local governance.
- Spearheaded bi-weekly strategy meetings and developed strategic bi-weekly planning meetings that reported and tracked grant progress deliverables.
- Facilitated and organized workshops and presented acequia governance and history that increased communication and informed elected officials.
- Partnered with acequia community board members and established by-laws that ensured water rights and water banking governance standards.
- Produced communication documents, including reports, fact sheets and opinion pieces that effectively supported policy proposals.
- Spearheaded acequia governance bodies and developed infrastructure presentations to support preparation, planning and Capital Outlay requests to present to New Mexico Legislators.
- Co-authored and edited Community Handbook and educated elected officials and community members that increased policies and procedures awareness and compliance.
- Collaborated with Executive Director and presented legislative policy initiatives to lawmakers for passage of laws for protection of New Mexico acequias.
- Engaged constituents and managed hearing processes that effectively supported New Mexico acequias and achieved funding for education and governance program and infrastructure projects.

The Great American Station Foundation /Director of Administration **Las Vegas, NM**

Reconnecting America /Executive Associate to the President ***10/1999 – 02/2004***

- Mentored, directed and developed administrative assistant and managed office operations to effectively support national non-profit organizations working on transportation and community development.
- Partnered with Executive President and Board of Directors and managed official documents and records that effectively supported mission of national non-profit organization.
- Collaborated with national partners with the launch of the new Center for Transit Oriented Development.
- Coordinated regional efforts in northeastern New Mexico in partnership with the National Park Service to examine the feasibility of National Heritage Area designation for this area.
- Spearheaded the organization's efforts to assist local tri-county farmers in securing a location for summer market activities.
- Represented organizational mission and communicated public transportation and walkable city initiatives during state legislature that achieved grant funding for feasibility study.
- Managed Membership Program and proofed and edited grant funding proposals that increased fundraising donations.

Rio de las Gallinas Acequia Association **Las Vegas, NM**

Adjudication Specialist and Paralegal ***02/2004 – 05/2012***

- Spearheaded grant administration processes and managed reports and schedules that effectively supported hydrologist and legal counsel with state adjudication defense of water rights on the Pecos River.
- Created acequia case files and updated land and irrigation history data that effectively communicated water rights processes.
- Created Access database and managed regional association contact data files that supported acequias disputed issues during legal court proceedings.
- Organized and coordinated logistics and presented activity reports during association meetings to ensure organizations initiatives achieved.

Rio de las Gallinas Acequia Association **Las Vegas, NM**

Grant Administrator & Water Adjudication Specialist ***09/1995 – 06/1999***

- Lobbied for and administered Acequia and Community Ditch Fund (ACDF).
- Attended court hearings and prepared legal defense strategies that effectively supported adjudication hearings.
- Partnered with acequia associations and communicated processes to support Gallinas River Water Master and Office of State

Engineer initiatives.

- Partnered with acequia commissioners, mayordomos and parciantes and defined irrigated land calculations that supported acequia claims.
- Prepared quarterly reports and communicated acequia concerns to Board of Directors to support legal defense and related activities.
- Analyzed GIS and Google Earth Maps and interpreted location and coordinates that supported infrastructure planning.

Education & Certifications

Western Center for Environment and Sustainability, Graduate Studies: Masters of Environmental Management
(Degree in progress) **Gunnison, CO**
Completed 2 semesters in 2014

New Mexico Highlands University **Las Vegas, NM**
Bachelor of Arts in Political Science degree **December 1998**
Minor: Environmental Science

Antioch University and Bartos Institute at United World College **Montezuma, NM**
Environmental Conflict Negotiation **July to December 2002**

Skills

PC Proficient: Microsoft Windows, Word, Excel, PowerPoint and Outlook, and various databases, including Access, ACT.

Bilingual English/Spanish- Fluent in speaking, writing and translation.

Affiliations

New Mexico Water Dialogue- Member 02/2010 – 2019
Board of Directors – 2010 to present - Promote mission of the water dialogue "To promote the wise stewardship and assure the availability of water resources for future generations of New Mexicans." Participate in and follow Regional and State Water Planning.

Environmental Leadership Program (ELP) Fellow Class of 2000
The ELP Fellowship is an innovative national program designed to build the leadership capacity of the environmental field's most promising emerging professionals. My ELP Fellowship project in 2000, 2001 and 2002 was to mobilize my home Village of Pecos, NM, in a river stewardship program that continues.

Awards

Woman of the Year given by the Pecos Valley Community Foundation, Pecos, NM - 2010

Karl Souder Award given by New Mexico Environmental Law Center, Santa Fe, NM
The award honors individuals or organizations that have made a significant contribution to the protection of New Mexico's water. - 1994

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

TESTIMONY IN SUPPORT OF PETITION BY TELESFOR "TED" BENAVIDEZ

My name is Telesfor "Ted" Benavidez. I am the elected Mayor of the Pecos Village since March 6th, 2018. My testimony will address section 20.6.4.9.B NMAC, demonstrating that designation of the waters of the Upper Pecos Watershed as ONRWs will benefit the State of New Mexico.

I was born in Santa Fe and raised in Pecos. My parents bought a house in Pecos in 1960. I graduated from Pecos High School. I did my freshmen year at Highlands University of Las Vegas before I left for the Marine Corps.

As Mayor, I make sure the Village has water, sewer, fire department and ambulance services. I established protocols and opened direct lines of communication between the Village and higher echelons of law enforcement to address citizen complaints and to ensure a safer, more peaceful community and provide for the apprehension of the criminal element and address the pervasive illegal drug culture in the community. I work with teachers and kids from Pecos

Independent Schools. Recently, I worked with Dr. Bennet who opened a Medical Clinic in the Village that will provide free-of-charge services to our community.

The waters of the Upper Pecos are among New Mexico's most treasured assets. Our river is what brings people to town to visit, which helps our economy. I believe that our river has one of the freshest waters in the State. Ensuring the waters of the Upper Pecos are protected for the benefit of current and future residents and visitors of Pecos Village is vital to the health of our community. There is not a summer that I do not go to the river for a picnic. I take my niece and nephew to collect river rocks in the shape of a heart. I know that other community members do the same. They go to the river to seek peace and quiet. Our kids swim in this river.

Without local tax increases to our community and with a minimal amount of debt, the current Pecos Village Administration has reached significant milestones to improve the quality of life of its citizens and provide for a safe, healthy, and prosperous community. We care about this river and the surrounding watershed so much, that we constructed 6.5-million-dollar Wastewater Treatment Facility.

The Village of Pecos encourages the New Mexico Water Quality Control Commission to grant Petitioners' request to designate the waters of the Upper Pecos Watershed as Outstanding National Resource Waters. Our river is one of the best water resources you can get. It is the lifeblood of our community, it fuels our economy, it is a place for us to go tubing in the summer and fishing year-round. A river like this is precious and needs to be protected to serve many generations to come.

Respectfully Submitted on this 10th day of March 2021.

TELESFOR "TED" BENAVIDEZ, Mayor
VILLAGE OF PECOS
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MayorT@villageofpecos.com

PETITIONERS' EXHIBIT

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STATE OF NEW MEXICO
WATER QUALITY CONTROL COMMISSION

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.

NON-TECHNICAL TESTIMONY IN SUPPORT OF PETITION BY PAULA GARCIA

I. QUALIFICATIONS AND INTRODUCTION

My name is Paula Garcia, and I am Executive Director of the New Mexico Acequia Association, ("NMAA"). I am also a rancher, farmer, and parciante of Acequia del Alto del Norte, and I serve as a Commissioner on the New Mexico Interstate Stream Commission. My resume is attached as Petitioners' Exhibit 20. NMAA is a Petitioner in the Petition to designate the waters of the Upper Pecos Watershed as Outstanding National Resource Waters ("Outstanding Waters" or "ONRWs"). Thank you for this opportunity to explain why NMAA is a Petitioner and supports this critical designation. My testimony will address section 20.6.4.9.B NMAC, demonstrating that designation of the waters of the Upper Pecos Watershed as ONRWs will benefit the State of New Mexico.

II. TESTIMONY

NMAA is a statewide, membership-based organization of acequias governed by a federation of acequias, the Congreso de las Acequias, which unanimously support protection of the Upper Pecos River through ONRW designation.

The mission of the NMAA is to protect water and our acequias, to grow healthy food for our families and communities, and to honor and preserve our cultural heritage. A primary means of realizing our mission is through the conservation and protection of water for future generations of acequieros.

"Agua es vida." The waters of New Mexico's Upper Pecos Watershed are the lifeblood of the region's acequia system, sustaining and enriching centuries-old acequias and farming and ranching traditions that depend upon clean water. Acequias depend upon clean water from the Pecos River for irrigating traditional crops and for sustaining vital cultural traditions. Acequia systems provide a significant benefit to the state, both culturally and economically.

Acequias have a long history of respect and stewardship of the waters of the Upper Pecos, which has resulted in the high water quality that these precious waters afford. Our intricate customs and traditions, our collective approach to water management, and our unique role in water governance has resulted in extensive empirical and cultural knowledge about the Pecos River and its respective waterways. Based upon this knowledge, we were compelled not merely to support designating the Upper Pecos Watershed as an ONRW, but to become a Petitioner in this important action before the Water Quality Control Commission.

One of the most effective ways to deliver on the promise of clean water and resilient watersheds for present and future generations is to designate the Upper Pecos Watershed as Outstanding Waters, and that is why NMAA is a Petitioner in this request for ONRW

designation. ONRW designation will help ensure that the Upper Pecos Watershed remains clean and sustains present and future generations of parciantes. Importantly, ONRW designation will complement and enhance acequias' traditional and historic uses of water, and we stand in strong support of this designation.

Respectfully submitted on this 10th day of March, 2021.

PAULA GARCIA, Executive Director
NEW MEXICO ACEQUIA ASSOCIATION
805 Early Street, No. B203
Santa Fe, NM 8755
(505) 995-9644
lamorena@lasacequias.org

PETITIONERS' EXHIBIT

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PAULA GARCIA

paulagarcia0902@gmail.com | 505-231-7752

Summary

Dedicated and service-oriented community leader with extensive experience as a non-profit executive and local government official. Highly proficient, articulate, and conscientious public servant committed to improving community well-being and the lives of families in rural communities in New Mexico.

Skills

- Excellent ability to work with diverse communities in New Mexico.
- Highly experienced on issues of water, agriculture, and rural development.
- Service on state and national policy advisory boards.
- Effective advocate for rural communities for over two decades.
- Experience with the legislative process at local, state, and federal levels.
- Dedicated public servant as a local elected official and a non-profit executive.

Experience

Interstate Stream Commissioner, Appointed 07/2019 - Current

Interstate Stream Commission | Santa Fe, NM

- Appointed by Governor Michelle Lujan Grisham for a six year term.
- As Commissioner, serve to carry out the mission of the Interstate Stream Commission to protect New Mexico's water and ensure compliance with interstate water compacts.
- Perform all required duties including research and analysis on water policy as well as decisions about policy, litigation, and water infrastructure projects.

Executive Director 01/1998 - Current

New Mexico Acequia Association | Santa Fe, NM

- Led creation of Congreso de la Acequias, the statewide governing body of the New Mexico Acequia Association, and built a broad statewide membership base.
- Developed policy strategies resulting in the passage of significant water legislation with support of legislative leadership.
- Worked successfully with diverse organizations working on water issues and presented at numerous conferences.
- Initiated community education program for acequias to strengthen local self-governance which has benefited hundreds of acequias.
- Established innovative youth and farmer training projects to promote agricultural revitalization in rural communities.
- Created an extensive outreach program promoting the participation of minority farmers and ranchers in USDA programs.

Chairwoman, Mora County Commission, Elected 01/2011 - 12/2018

Mora County | Mora, NM

- Completed major public works projects with leadership, management skills, and ability to collaborate and secure resources.
- Enacted policies to protect land and water through ordinances and engaged in strategic litigation to defend public lands.
- Improved services in Mora County related to fire protection and emergency medical services,

including founding the Mora County Ambulance Service.
- Provided leadership in addressing rural development, infrastructure planning, natural resource, and economic development policy.

President and Board Member 01/2011 - 12/2018

New Mexico Counties | Santa Fe, NM

- Served as President of the Board and Chair of the Commissioner Affiliate comprised of all the County Commissioners in New Mexico.
- Provided leadership in developing federal and state policy recommendations.
- Worked on numerous policy committees including criminal justice, health care, tax, economic development, natural resources. Established the first Native American Committee.

Chairwoman and Member 06/2009 - 12/2015

USDA Minority Farmers Advisory Committee | Washington, DC

- Appointed by United States Department of Agriculture (USDA) Secretary Tom Vilsack during the Obama administration to advise on improving participation of minority farmers and ranchers in USDA programs. Served as first woman Chair during second term.
- Developed policy recommendations to address civil rights and minority participation in USDA programs.

Education and Training

University of New Mexico | Albuquerque, NM, United States
Studies in science, engineering and community and regional planning

Activities and Honors

University of New Mexico Presidential Scholar, 1989-1992
Housing and Urban Development Fellowship in Community Planning, 1997-1997
Member, New Mexico State Land Trust Advisory Board, Appointed by State Land Commissioner, 2002-2006
Member, New Mexico Water Trust Board, Appointed by Governor, 2002-2006
Member, Governor's Blue Ribbon Task Force on Water, Appointed by Governor, 2002-2010
Member of the Utton Resource Center at UNM Law School, 2000-2010
W.K. Kellogg Foundation Food and Society Plenary Speaker, 2006
Woman of the Year Award from the NM Commission on the Status of Women, 2010
Emerging Democratic Woman of Year from Emerge New Mexico, 2010
Latina of the Year by the Imagen Foundation and Dolores Huerta Foundation, 2010
Member, Los de Mora Growers Cooperative, 2018 - Present
Co-Owner, Garcia Family Farms, 2018 - Present
Executive Committee Member, Rio Grande Water Fund, 2018 - Present

PETITIONERS' EXHIBIT 21

Video: "These Rivers Carry Our Stories: Outstanding Waters Protections in Pecos"

Available at: https://youtu.be/ahUFrQPO7Q8