Candidate Conservation Agreement with Assurances for the Rio Grande Cutthroat Trout (*Oncorhynchus clarki virginalis*) between Vermejo Park Ranch New Mexico Department of Game and Fish Colorado Division of Parks and Wildlife and the U.S. Fish and Wildlife Service

This Candidate Conservation Agreement with Assurances (CCAA), effective and binding on the date of last signature below, is between Vermejo Park Ranch, New Mexico Department of Game and Fish, and Colorado Division of Parks and Wildlife (Cooperators), and the U.S. Fish and Wildlife Service (Service) (collectively, the Property Owner, Cooperators, and the Service will be referred to as Partners throughout this document):

Property Owner: Vermejo Park, LLC d/b/a Vermejo Park Ranch
P.O. Drawer E
Raton, NM 87740

Cooperators: New Mexico Department of Game and Fish (NMDGF)
P.O. Box 25112
1 Wildlife Way
Santa Fe, New Mexico 87504

Colorado Division of Parks and Wildlife (CPW)
6060 Broadway
Denver, Colorado 80216

Service: The Service designates the following individual as the Agreement Administrator:
Field Supervisor
New Mexico Ecological Services Field Office
U.S. Fish and Wildlife Service
2105 Osuna Rd NE
Albuquerque, New Mexico 87113.

Tracking Number: TE-224081-0

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1. Responsibilities of the Partners:

(1) Vermejo Park Ranch:

(A) Sign the CCAA, accept permit and implement conservation measures in the CCAA fully.

(B) Submit an annual report to the Service that documents activities implemented under the CCAA, their effects, and effects of activities undertaken in prior years that require multi-year monitoring.

(2) NMDGF:

(A) Being the primary party responsible for conducting monitoring activities on lands and waters in New Mexico as specified in Section 13 of this CCAA.

(B) Working with Vermejo Park Ranch to ensure appropriate implementation of conservation measures.

(3) CDPW:

(A) Being the primary party responsible for conducting monitoring activities on lands and waters in Colorado as specified in Section 13 of this CCAA.

(B) Working with Vermejo Park Ranch to ensure appropriate implementation of conservation measures.

(4) Service:

(A) Making a permit decision on the application from Vermejo Park Ranch, under section 10(a)(1)(A) of the Endangered Species Act (ESA), in accordance with 50 CFR 17.22 and 17.32 (d), with a term of 25 years, that will provide Vermejo Park Ranch with authorization for incidental take of Rio Grande cutthroat trout and provide regulatory assurances should the species be listed under the ESA in the future. The proposed permit would authorize incidental take of Rio Grande cutthroat trout resulting from otherwise lawful activities on the lands and waters covered under this CCAA, consistent with management under this CCAA. Such activities may include, but are not limited to hunting, road maintenance, prescribed burning, grazing, farming, fishing, water resource development and management, construction and maintenance of structures and utilities, forest management (e.g., timber harvest and thinning activities), gravel and rock removal, mineral, oil, and gas development, recreation, and related ranch activities.

(B) Reviewing, within 60 days, monitoring and other reports submitted by the Cooperators to the Service for compliance with the terms of the CCAA and notify Cooperators of any compliance issues or possible amendments to the CCAA that may warrant consideration.

(C) Carrying out any responsibilities for implementing conservation or other measures agreed to by the Service under this Agreement. The Service will continue to work with all Cooperators in the conservation of the Rio Grande cutthroat trout and will support local efforts within the Rio Costilla watershed to restore native fish under the guidance of the NMDGF's Long Range Plan for the Management of Rio Grande Cutthroat Trout in New Mexico, CDPW's Conservation Plan for Rio Grande Cutthroat Trout in Colorado, and other conservation planning documents.

2. Covered lands and waters: All waters of the Rio Costilla watershed on lands and waters owned and managed by Vermejo Park Ranch in Costilla County, Colorado, and Taos County, New Mexico. Perennial waters within this area include the #1 or Costilla Creek, #2 or Casias

Creek, East Fork Costilla Creek, West Fork Costilla Creek, #1 Lake, #2 Lake, the Glacier Lakes, the Seven Lakes complex, Casias Lakes, Beaver Lake, Long Canyon Creek, Santistevan Creek, Costilla Reservoir, Costilla Creek immediately downstream of the reservoir, and their associated tributaries (approximately 35,000 acres, 63 stream miles, and 15 lakes).

3. Authority and Purpose: Sections 2, 7, and 10 of the ESA allow the Service to enter into this CCAA. Section 2 of the ESA states that encouraging interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the Nation's heritage in fish, wildlife, and plants. Section 7 of the ESA requires the Service to review programs that it administers and to utilize such programs in furtherance of the purposes of the ESA. By entering into this CCAA, the Service is utilizing its Candidate Conservation Programs to further the conservation of the Nation's fish and wildlife. Lastly, section 10(a)(1)(A) of the ESA authorizes the issuance of enhancement of survival permits which provide for incidental take consistent with activities implemented under the CCAA.

The purpose of this CCAA is for Vermejo Park Ranch to commit to implement conservation measures for Rio Grande cutthroat trout in order to receive assurances from the Service that additional conservation measures will not be required and additional land, water, or resource use restrictions will not be imposed should the species become listed in the future. Conservation measures include removing nonnative species and increasing the Rio Grande cutthroat trout population numbers so that they are capable of migrating among Rio Costilla tributaries.

4. Description of Existing Conditions:

The Rio Grande cutthroat trout, one of 14 subspecies of cutthroat trout, is native to the Rio Grande, Pecos River, and Canadian River basins in New Mexico and Colorado. It is the southernmost subspecies of cutthroat trout, differentiated by the large spots that are concentrated towards the tail and colorful pink or orange hues on its belly and sides.

As is true of other subspecies of cutthroat trout, Rio Grande cutthroat trout are found in clear cold streams. Unlike some subspecies of cutthroat trout, such as the Bonneville (*Oncorhynchus clarki utah*) and Yellowstone (*Oncorhynchus clarki bouvieri*) cutthroat trout, Rio Grande cutthroat trout did not originally inhabit large lake systems. However, they have been introduced into coldwater lakes and reservoirs. The species spawns as high water flows from snowmelt recedes. In New Mexico, this typically occurs from the middle of May to the middle of June (NMDGF 2002). Spawning is believed to be tied to day length, water temperature, and runoff (Sublette *et al.* 1990, Behnke 2002).

Because of nonnative species introductions, Rio Grande cutthroat trout are now restricted to streams that are narrow and small compared to the larger streams they once occupied; therefore, the absolute loss of habitat is much greater than stream miles might indicate. There are approximately 105 core (<1 percent introgressed) or conservation (<10 percent introgression) Rio Grande cutthroat trout populations distributed in high elevation streams of New Mexico and Colorado (Alves *et al.* 2007). These populations occupy approximately 10 percent of historical habitat. Rio Grande cutthroat trout face a variety of imminent threats including fragmentation

and isolation, small population size, presence of nonnative trout, whirling disease, poor habitat conditions, fire, drought, and the effects of climate change. Because of the range contraction and the imminent threats, the Rio Grande cutthroat trout became a candidate species on May 14, 2008 (73 FR 27900), indicating that listing of the Rio Grande cutthroat trout was warranted but precluded by higher priority actions. The species was given a listing priority number of 9, indicating a subspecies facing imminent threats of moderate to low magnitude.

An expanded distribution of the Rio Grande cutthroat trout in the Rio Costilla watershed is expected to reduce or eliminate threats to the species; a metapopulation distributed among several tributaries will maintain genetic diversity and life history characteristics and has a higher probability of long term persistence.

Currently, cooperative efforts are in place to restore this subspecies to the Rio Costilla watershed, where much of the habitat for Rio Grande cutthroat trout exists on private land. A portion of the covered lands and waters – upper Costilla Creek, East Fork Costilla Creek, West Fork Costilla Creek, Glacier Lakes and #1 Lake on Vermejo Park Ranch – has been restored and stocked with Rio Grande cutthroat trout (Figure 1). Santistevan Creek and the Casias Lakes are in the final stages of restoration and are expected to be fully stocked with Rio Grande cutthroat trout in 2011. Upper #2 Creek was restored and stocked in 2011, and an unnamed tributary and Allen Creek were restored in 2012. The remainder of the watershed above the reservoir contains brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), rainbow trout (*Oncorhynchus mykiss*), and rainbow trout x cutthroat trout hybrids. The Seven Lakes, Casias Lakes, Beaver Lake, and #2 Lake have all been stocked with nonnative trout for recreational purposes in the past, although #2 Lake is currently fishless and nonnative fishes have been removed from the four Casias lakes. Costilla Reservoir was stocked with nonnative trout for many years and contains a mixed species fishery.

5. Threats

Threats to the Rio Grande cutthroat trout include stream drying, dams, habitat degradation, changes in hydrology, and hybridization with rainbow trout or competition with brown and brook trout (Pritchard and Cowley 2006). These threats are likely exacerbated by climate change. Conservation populations (populations with less than 10 percent introgression) are now concentrated in elevations from 2,743–3048 m (9,000–10,000 ft) (Alves *et al.* 2008). High-elevation streams (above 2,743 m (9,000 ft)) are subject to extreme and fluctuating environmental conditions including forest fires, freezing, and dewatering (Novinger and Rahel 2003). In addition, headwater mountain streams often lack critical resources such as deep pools (Harig and Fausch 2002) and provide insufficient refuge from catastrophic disturbance (Pritchard and Cowley 2006).

Habitat Fragmentation

Historically, many watersheds supporting Rio Grande cutthroat trout contained streams that were connected. Ninety-three percent of the conservation populations, representing 80 percent of occupied miles, are in isolated stream fragments (Alves *et al.* 2008). No populations are considered to have strong connectivity (i.e., $\geq$ 5 connected streams with open migration

corridors) (Alves *et al.* 2008). Habitat fragmentation reduces the total area of habitat available, reduces habitat complexity, and prevents gene flow (Saunders *et al.* 1991, Burkey 1995, Rieman and McIntyre 1995, Dunham *et al.* 1997, Frankham *et al.* 2002, Noss *et al.* 2006). Isolated populations are vulnerable to extirpation through demographic stochasticity (random changes in the population structure, e.g., uneven male/female ratios); environmental stochasticity (random changes in the fishes' surroundings) and catastrophes (e.g., fires, stream drying, freezing); loss of genetic heterozygosity (genetic diversity) and rare alleles (inherited forms of a genetic trait); and human disturbance (Shaffer 1987, Rieman *et al.* 1993, Burkey 1995, Dunham *et al.* 1997, Frankham *et al.* 2002).

Drought

Decreased stream flow reduces the amount of habitat available for aquatic species, and water quality (e.g., temperature, dissolved oxygen) may become unacceptable in declining flow. Although not all small streams have equal risk, small headwater streams, especially those with an inadequate number of deep pools, are most likely to lose suitable Rio Grande cutthroat trout habitat.

Fire

Wildfires are a natural disturbance in forested watersheds. Denuded watersheds are susceptible to heavy precipitation leading to severe floods and ash flows. Although Rio Grande cutthroat trout may survive the fire, ash and debris flows that occur after a fire can eliminate populations of fish from a stream (Rinne 1996, Brown *et al.* 2001, USFS 2006, Patten *et al.* 2007), and the fire suppression activities (e.g., fire retardant, water removal, road construction) may also affect stream ecosystems (Buhl and Hamilton 2000, Backer *et al.* 2004).

Nonnative Species

According to an annual database compiled by fisheries professionals in New Mexico and Colorado, nonnative trout co-occur with 38 percent of Rio Grande cutthroat trout conservation populations (2010 database). Because of the documented negative impacts of nonnative trout on cutthroat trout, including hybridization and competition, nonnatives are an ongoing threat to the security of Rio Grande cutthroat trout. Nonnative rainbow, brook, and brown trout and Yellowstone cutthroat trout have been introduced extensively throughout the range of Rio Grande cutthroat trout, and they compete (brook and brown trout) and hybridize (rainbow and other cutthroat subspecies) with Rio Grande cutthroat trout.

Recreational Fishing

No commercial harvest occurs for Rio Grande cutthroat trout. Recreational angling occurs on approximately 84 percent of the populations (Alves *et al.* 2007). Fishing regulations in New Mexico and Colorado appropriately manage recreational angling. For example, many of the streams with Rio Grande cutthroat trout are "catch and release." Those that are not have a two (New Mexico) or four (Colorado) fish limit. Many of the streams with pure populations of Rio Grande cutthroat trout are remote and angling pressure is light. Even in the more accessible

streams with more frequent angling, repeated monitoring of the populations has shown the populations remain stable (2010 database). Therefore, angling is not considered a threat to Rio Grande cutthroat trout.

Climate Change

The extent to which climate change will affect Rio Grande cutthroat trout is not known with certainty at this time. However, projections point to a rangewide negative impact through increased water temperatures, decreased streamflow, change in hydrograph, and an increased occurrence of extreme events. Even though aquatic ecosystems have historically experienced temperatures similar to those projected, the projected rate of change falls outside the natural range of variation, and is therefore unprecedented (Poff et al. 2002). The current extent of habitat fragmentation makes adjustment to these changes through dispersal unlikely (Poff et al. 2002). Therefore, although the extent that the global climate will modify Rio Grande cutthroat trout habitat in the future is not known with certainty, based on the current status of the species, the changes to its habitat that have already been observed, and the changes that are anticipated to occur in the foreseeable future based on the best available science, climate change is an additional threat to the persistence of Rio Grande cutthroat trout.

For more detailed information regarding threats to the species, please refer to the Rio Grande cutthroat trout candidate status review, published May 14, 2008 (73 FR 27900).

6. Conservation Measures

The following conservation measures will address the threats to Rio Grande cutthroat trout on covered lands and waters by removing nonnative species and preventing their immigration back into the watershed, reintroducing genetically pure Rio Grande cutthroat trout to the streams within the covered lands and waters, and working with the Cooperators to manage and monitor Rio Grande cutthroat trout populations.

(1) Conservation measures implemented by Vermejo Park Ranch:

Eliminate Nonnative Fish

(A) In cooperation with NMDGF, Vermejo Park Ranch will install temporary upstream migration barriers on their lands and waters to prevent the threat of upstream migration of nonnative fishes into restored stream sections and to facilitate nonnative removal efforts.

(B) Vermejo Park Ranch will purchase the piscicides needed to remove nonnative fish from waters on the covered lands and waters, excluding Costilla Reservoir.

(C) Vermejo Park Ranch will discontinue stocking of nonnative trout into the covered lands and waters.

Maintain Habitat Quality

(D) Vermejo Park Ranch will conduct land use activities in the covered lands and waters in a way that minimizes negative impacts on fish populations and habitats, including:

- Using best management practices during land use activities;

- Employing erosion and siltation control techniques when necessary during land management, infrastructure maintenance, or land use activities in or along stream corridors to maintain habitat quality;
- Conducting riparian monitoring to assess impacts of domestic grazing, if present; and
- Complying with NMDGF and CPW angling restrictions on all waters within the covered area.

Reestablish and Maintain Viable Populations

(E) In cooperation with NMDGF and CDPW, Vermejo Park Ranch will work to restore and manage viable populations of Rio Grande cutthroat trout on Vermejo Park Ranch including:

- Providing controlled access to the covered lands and waters to NMDGF and CDPW for purposes of planning and conducting population restoration efforts, monitoring restored populations, and enforcement of state angling regulations;
- Reestablishing and reconnecting populations of Rio Grande cutthroat trout in the headwaters of the Rio Costilla to reestablish a genetically diverse metapopulation more likely to withstand demographic and environmental stochasticity.
- Monitoring restored Rio Grande cutthroat trout populations;
- Maintaining temporary fish migration barriers until they are removed or no longer needed; and
- Conduct fishery monitoring activities described in the Biological Monitoring Section of this CCAA, including the use of gillnets, trap nets, seines, and electrofishing gear.

(2) Conservation Measures implemented by New Mexico Department of Game and Fish:

(A) In cooperation with the Partners, NMDGF will implement the Costilla Implementation Plan (2005), which describes how population restoration should proceed.

(B) To enable successful completion of proposed restoration, NMDGF will coordinate activities among the Partners.

(C) NMDGF will oversee removal of nonnative fishes within the covered waters.

(D) NMDGF will attempt to restore and manage viable populations of Rio Grande cutthroat trout in suitable waters within the Rio Costilla watershed as agreed to by the Partners. These activities include:

- As soon as practicable, restocking Rio Grande cutthroat trout into restored sections of the covered lands and waters. Reasonable effort will be made to restock such that populations are fishable within 2 to 4 years;
- Coordinating with Partners to propose and enforce angling regulations established by the New Mexico Game Commission in the Rio Costilla watershed to manage for viable Rio Grande cutthroat trout populations.

(E) NMDGF will purchase piscicides to remove nonnative fish from Costilla Reservoir.

(F) In cooperation with Vermejo Park Ranch, NMDGF will conduct fishery monitoring activities in New Mexico as described in the Biological Monitoring Section of this CCAA, including the use of gillnets, trap nets, seines and electrofishing gear.

(3) Conservation Measures implemented by Colorado Division of Parks and Wildlife:

(A) CDPW will work with Partners to manage self-sustaining populations of Rio Grande cutthroat trout in East and West Fork Costilla Creek.
(B) CDPW will manage Glacier Lake #1 to provide recreational fishing opportunities to guests of Vermejo Park Ranch.
(C) In cooperation with Vermejo Park Ranch, CDPW will conduct fishery monitoring activities in Colorado as described in the Biological Monitoring Section of this CCAA, including the use of gillnets, trap nets, seines, and electrofishing gear.

(4) Conservation Measures implemented by the U.S Fish and Wildlife Service:
(A) The Service agrees to provide technical assistance in CCAA and permit application development.
(B) The Service will work with Cooperators to reduce impacts associated with land management practices (Covered Activities) that adversely affect Rio Grande cutthroat trout in the Rio Costilla watershed.

7. Expected Benefits

As identified in the Service's CCAA Final Policy (64 FR 32726), and regulations at 50 CFR 17.22 and 17.32, to enter into a CCAA and issue a permit and assurances, the Service must determine that the conservation measures and expected benefits, when combined with those benefits that would be achieved if it is assumed that similar conservation measures were also implemented on other necessary properties, would preclude or remove the need to list Rio Grande cutthroat trout pursuant to the ESA. Consistent with the CCAA policy, meeting the CCAA standard does not depend on the number of acres covered, and adoption of the CCAA and enrollment of landowners does not guarantee that listing will be unnecessary.

It is the desire of the Partners to augment and reconnect populations of Rio Grande cutthroat trout located in the headwaters of the Rio Costilla in order to reestablish a metapopulation. If successful, the restored area would include suitable and diverse habitats that can function to maintain genetic diversity and adaptability, allow expression of all life history traits appropriate for Rio Grande cutthroat trout, significantly reduce the threat of complete (as opposed to localized) extinction due to natural catastrophes, and provide recreational opportunities.

The expected conservation benefits from restoration efforts associated with this CCAA include:
(1) Restoration of Rio Grande cutthroat trout to approximately 63 miles (101 kilometers) of stream and approximately 10 lakes within approximately 10 years, creating a large population capable of migrating among tributaries, thereby maintaining genetic diversity and fluvial life history characteristics.
(2) Establishing a metapopulation of Rio Grande cutthroat trout that would have a higher probability of persistence than isolated populations during catastrophic events, including fire, drought, and in the face of climate change, improving the long-term viability of the subspecies within the watershed.
(3) Maintenance of a robust, self-sustaining Rio Grande cutthroat trout metapopulation in the covered lands and waters

(4) Demonstration of a cooperative native fishes restoration project on a watershed scale that could encourage public recognition and support.
(5) Recreational fishing opportunities to experience the Rio Grande cutthroat trout in its historical habitat.

8. Covered Activities - Level/Type of Take/Impacts

Specific authorization of incidental take is provided as part of the Permit issued by the Service in conjunction with this CCAA. Should the Rio Grande cutthroat trout become listed under the ESA, authorization for incidental take under the Permit will be limited to hunting, road maintenance, prescribed burning, grazing, farming, recreational fishing, water resource development and management, construction and maintenance of structures and utilities, forest management (e.g., timber harvest and thinning activities), gravel and rock removal, mineral, oil, and gas development, recreation, and related ranch activities. Incidental take by Vermejo Park Ranch and the resulting effects to Rio Grande cutthroat trout are expected to be minimal, and the actual take is expected to be low relative to the benefits of the conservation measures to Rio Grande cutthroat trout. Since trout habitat protection and enhancement measures will be in place on covered lands and waters, impacts would be limited to minor disturbance from various agricultural or recreational activities, fishing, or from activities related to Rio Grande cutthroat trout habitat protection or improvement.

Incidental take will likely occur sporadically on covered lands and waters and is not expected to nullify the conservation benefits likely to accrue under the CCAA. The actual level of take of Rio Grande cutthroat trout is largely unquantifiable but will be monitored indirectly through population and habitat monitoring strategies. These include monitoring the extent of occupied habitat and habitat conditions. Road maintenance and other forest management practices are not expected to degrade habitat on a large scale on covered lands and waters, since best management practices will be utilized to meet Vermejo Park Ranch goals while also meeting Rio Grande cutthroat trout habitat and population targets. Some direct impacts could occur from recreational fishing, although angling opportunities will comply with NMDGF and CDPW regulations. The New Mexico State Game Commission and the Colorado Wildlife Commission set fishing limits by regulation to maintain viable populations within the covered lands and waters that support the conservation objectives of this CCAA. There is no evidence that recreational fishing in accordance with regulations is a current threat to Rio Grande cutthroat trout populations or rangewide. Nonetheless, Vermejo Park Ranch will be required to provide an annual report to the Service that documents any take that occurs under the activities authorized under this CCAA and its accompanying permit.

Covered activities that could result in take are outlined below.

(1) Vermejo Park Ranch:

(A) Recreational and guided angling enterprises that include take of Rio Grande cutthroat trout on covered lands and waters in accordance with NMDGF and CDPW regulations;
(B) Land and ranch management activities conducted in accordance with State and Federal law and the purposes of this CCAA including hunting, road maintenance,

prescribed burning, grazing, farming, fishing, water resource development and management, construction and maintenance of structures, roads, fences, and utilities, forest management (e.g., timber harvest and thinning activities), gravel and rock removal, mineral, oil, and gas development, recreation, native species conservation, research, and related ranch activities;

(D) In coordination with CDPW and NMDGF, fishery monitoring activities as defined under the Biological Monitoring section of this CCAA, including the use of gillnets, trap nets, seines, and electrofishing gear, or other appropriate assessment tools and techniques;

(E) In coordination with CDPW and NMDGF, temporary fish migration barrier removal to reconnect restored segments of the Rio Costilla watershed within the covered lands and waters;

(F) In coordination with CDPW and NMDGF, collection, capture, holding, and transport of all age classes of Rio Grande cutthroat trout, including eggs and milt, from populations within the covered lands and waters for purposes of stocking or otherwise maintaining lake and other non-sustaining populations of Rio Grande cutthroat trout within the covered lands and waters, or stocking waters outside the covered lands and waters;

(G) In coordination with CDPW and NMDGF, genetic testing, and other research on Rio Grande cutthroat trout populations; and

(H) Exploration and development of alternatives to maintain non-sustaining lake populations, such as inlet spawning streams.

9. Assurances Provided

Through this CCAA, the Service provides Vermejo Park Ranch assurances that no commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the Agreement would be required without the consent of the Permittee (Vermejo Park Ranch) (50 CFR 17.22(d)(5) and 17.32(d)(5)).

10. Assurances Provided to Vermejo Park Ranch in Case of Changed or Unforeseen Circumstances

The assurances listed below apply to Vermejo Park Ranch. The assurances apply only where the enhancement of survival permit associated with the CCAA and the CCAA itself are being properly implemented, and only with respect to species covered by the CCAA, the Rio Grande cutthroat trout.

(1) *Changed circumstances provided for in the CCAA.* If additional conservation measures are necessary to respond to changed circumstances such as drought, increased stream temperatures, wildfire, and introduction of exotic species and the measures were set forth in the CCAA's operating conservation program, Vermejo Park Ranch will implement those measures specified in the CCAA. Changed circumstances that may occur include:

(A) Drought: The amount of stream habitat that will be restored per the CCAA should provide adequate refugia habitat for Rio Grande cutthroat trout to withstand periods of drought.

(B) Increased stream temperature: The maintenance of healthy riparian habitat will help buffer streams from increased temperatures. Additionally, the spring-fed nature of many of the streams on Vermejo Park Ranch will provide additional protection from temperature increases due to air warming.

(C) Wildfire: Should wildfire occur in the area, Vermejo Park Ranch will work with NMDGF to determine and implement appropriate remedial measures, if necessary.

(D) Introduction of nonnative trout: Should accidental introduction of nonnative trout occur, Vermejo Park Ranch will work with NMDGF to determine and implement appropriate remedial measures, if necessary.

(2) *Changed circumstances not provided for in the CCAA.* If additional conservation measures not provided for in the CCAA's operating conservation program are necessary to respond to changed circumstances, the Service will not require any conservation measures in addition to those provided for in the CCAA without the consent of Vermejo Park Ranch.

(3) *Unforeseen circumstances.*

(A) If additional conservation measures are necessary to respond to unforeseen circumstances, the Service may require additional measures of Vermejo Park Ranch, but only if such measures are limited to modifications within the CCAA's conservation strategy for the affected species, and only if those measures maintain the original terms of the CCAA to the maximum extent possible. Additional conservation measures will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the CCAA without the consent of Vermejo Park Ranch.

(B) The Service will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. The Service will consider, but not be limited to, the following factors:

(1) Size of the current range of the Rio Grande cutthroat trout;
(2) Percentage of range adversely affected by the CCAA;
(3) Percentage of range conserved by the CCAA;
(4) Ecological significance of that portion of the range affected by the CCAA;

(5) Level of knowledge about the Rio Grande cutthroat trout and the degree of specificity of the species' conservation program under the CCAA; and
(6) Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the Rio Grande cutthroat trout in the wild.

11. Monitoring Provisions

Partners in the CCAA will collaboratively implement monitoring of Rio Grande cutthroat trout and their habitat as appropriate and as described below. Monitoring is intended to measure the progress associated with implementation of the conservation measures outlined in this CCAA and measure their effectiveness. Monitoring results may suggest adaptive management strategies in response to changing conditions or new information, but will not require additional conservation measures, financial obligations or additional land, water, or natural resource use restrictions from Vermejo Park Ranch beyond those agreed to in this CCAA.

12. Compliance Monitoring

Cooperators will be responsible for the monitoring and reporting specified herein related to implementation of the CCAA and fulfillment of its provisions, including implementation of agreed-upon conservation measures and take authorized by the permit. The Service, after reasonable prior notice to Vermejo Park Ranch, may enter the covered lands and waters to ascertain compliance with the CCAA. The Service, and each of its employees or agents, may be required to sign a liability waiver prior to entering all or portions of the covered lands and waters. Vermejo Park Ranch can refuse entry to the Service if it can demonstrate that entry by the Service will interfere with scheduled ranch activities but will provide entry on the next available dates.

13. Biological Monitoring

The biological monitoring associated with this CCAA relates to determining the status of Rio Grande cutthroat trout and the effects of the conservation measures on the species within the covered lands and waters. Once established, Rio Grande cutthroat trout populations in Costilla (#1) and Casias (#2) creeks upstream of Costilla Reservoir will each support a self-sustaining population of at least 500 adults (defined as a fish $\geq$ 120 mm), which is roughly equivalent to an effective population size (number of adults actually contributing offspring to the population) of 500, as determined through monitoring activities described below. To be considered self-sustaining (surviving in the absence of active management intervention over time), the survey results on each creek (#1 and #2) will include evidence of recruitment, such as the presence of young of year fish, juvenile fish, or multiple age or size classes. If a population does not meet these self-sustaining parameters (500 adults and evidence of recruitment) during regularly scheduled monitoring activities, another survey will be conducted the following year. If the population does not meet the parameters after the second consecutive survey, the Partners agree to review the potential causes of the population not meeting the required parameters and the conservation measures at the annual meeting of the Partners. If the Partners do not agree on the

causes or remedies, an independent assessment will be conducted by a mutually agreed-upon party, and the resulting recommendations will be considered under the framework of the Agreement.

The Partners agree to the following:

(1) US Fish and Wildlife Service:

(A) While the Service relies on the Vermejo Park Ranch and the other Cooperators to accomplish biological monitoring within the covered lands and waters, the Service reserves the right to conduct such monitoring. This CCAA will grant Service employees, agents, and contractors, after at least 48 hours prior notice to Vermejo Park Ranch, a controlled right to enter the covered lands and waters to conduct biological/effectiveness monitoring. The Service, and each of its employees or agents, may be required to sign a liability waiver prior to entering all or portions of the covered lands and waters. Vermejo Park Ranch can refuse entry to the Service if it can demonstrate that entry by the Service will interfere with scheduled ranch activities but will provide entry on the next available dates.

(2) New Mexico Department of Game and Fish agrees to:

(A) Coordinate with Vermejo Park Ranch to conduct surveys at least once every 5 years in Costilla (#1) and Casias (#2) creeks upstream of Costilla Reservoir to assess the status of restored populations of Rio Grande cutthroat trout within the New Mexico portion of the covered lands and waters. Such surveys shall assess commonly measured population metrics such as condition, size structure, abundance, density, reproduction, and year class strength;

(B) Coordinate with Vermejo Park Ranch to conduct surveys at least once every 5 years on selected lakes in the New Mexico portion of the covered lands and waters to assess population abundance, condition, size structure, recruitment, and water quality; and

(C) Coordinate with Vermejo Park Ranch to periodically monitor function and stability of the upstream fish migration barriers.

(3) Colorado Division of Parks and Wildlife agrees to:

(A) Coordinate with Vermejo Park Ranch to conduct population surveys at least once every 5 years to assess the status of Rio Grande cutthroat trout in selected streams within the Colorado portion of the covered lands and waters. Such surveys shall assess commonly measured population metrics such as condition, size structure, abundance, density, reproduction, and year class strength; and

(B) Coordinate with Vermejo Park Ranch to conduct surveys once every 5 years on Glacier Lake in the Colorado portion of the covered lands and waters to assess population abundance, condition, recruitment, size structure, and water quality. The survey will be used to evaluate Colorado's Rio Grande cutthroat trout lake stocking program.

(4) Vermejo Park Ranch agrees to:

(A) Coordinate with CDPW and NMDGF to conduct surveys to assess the status of restored Rio Grande cutthroat trout populations within the covered lands and waters as described above in Section 13 (2)(A) and (3)(A).
(B) Annually, monitor function and stability of any remaining temporary upstream migration barriers within the covered lands and waters;
(C) Coordinate with NMDGF to collect an adequate sample of fin clips for population genetic analyses and monitoring on an as needed basis; and
(D) Record and provide the number of anglers fishing and estimated Rio Grande cutthroat trout harvest within the covered lands and waters to NMDGF each year for inclusion in the annual report.

An annual meeting will be held to review field season activities, at which time preliminary annual reports on the previous year's operations are due from each Cooperator. A consolidated annual report will be prepared by NMDGF summarizing conservation activities that occurred during the calendar year and detailing any take of listed species that occurred, as well as activities planned for the following year and the anticipated level of take. The annual report will be due February 15 of the following year through the life of this CCAA, and copies will be made available to all Partners.

14. Notification of Take Requirement

By signature of this CCAA, the Cooperators agree to provide the Service or other permitted parties with an opportunity to rescue individuals of any Rio Grande cutthroat trout before any activity expected to result in take occurs, except as specified in this CCAA. Notification of take is not necessary for angling activities, when capturing, holding, and transporting fish for conservation or broodstock purposes, or during biological monitoring, and land management activities where rescue is not likely to be needed. When necessary, notification that take of Rio Grande cutthroat trout may occur must be provided to the Service at least 60 days in advance of the action, except under emergency circumstances. In the event that take occurs as the result of emergency circumstances, the Service shall be informed of those circumstances and the resultant take within 72 hours following such an event.

15. Duration of CCAA and Permit

The CCAA, including any commitments related to funding under Service programs, will be in effect for a duration of 25 years following its approval and signing by the Partners. The Section 10(a)(1)(A) enhancement of survival permit authorizing take of the species will become effective on the date of the final rule listing Rio Grande cutthroat trout and will expire when this CCAA expires or is otherwise suspended or terminated. The permit and CCAA may be extended beyond the specified terms prior to their expiration through the permit renewal process and with agreement of the Partners.

16. Modifications

After approval of the CCAA, the Service may not impose any new requirements or conditions on, or modify any existing requirements or conditions applicable to, a landowner or successor in

interest to the landowner, to compensate for changes in the conditions or circumstances of any species or ecosystem, natural community, or habitat covered by the CCAA except as stipulated in 50 CFR 17.22(d)(5) and 17.32(d)(5).

17. Modification of the CCAA

Any Partner may propose modifications or amendments to this CCAA by providing written notice to and obtaining the written concurrence of the other Partners. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results. The Partners will use their best efforts to respond to proposed modifications within 60 days of receipt of such notice. Proposed modifications will become effective upon written concurrence of all Partners and through a formal amendment process.

18. Amendment of the Permit

The permit may be amended to accommodate changed circumstances in accordance with all applicable legal requirements, including but not limited to the Endangered Species Act, the National Environmental Policy Act, and the Service's permit regulations at 50 CFR 13 and 50 CFR 17. The party proposing the amendment shall provide a statement describing the proposed amendment and the reasons for it which shall be agreed upon by all Partners.

19. Termination of the CCAA

As provided for in Part 8 of the Service's CCAA Policy (64 FR 32726, June 17, 1999), Vermejo Park Ranch may terminate its participation in the CCAA prior to its expiration date, even if the expected benefits have not been realized. If the CCAA is terminated, however, Vermejo Park Ranch is required to surrender the enhancement of survival permit at termination, thus relinquishing its take authority (if the species has become listed) and the assurances granted by the permit. Vermejo Park Ranch is required to give 30 days written notice to the other Partners of the intent to terminate its participation in the CCAA, and must give the Partners an opportunity to relocate Rio Grande cutthroat trout within 180 days of the notice.

In the unlikely event that a court of competent jurisdiction issues an order, judgment, opinion, or decree that invalidates, nullifies, or sets aside any obligations or benefits of the Cooperators as set forth in this CCAA or finds that the CCAA violates applicable Federal or State law, including invalidation of 50 CFR 17.22 and 17.32 as it reads as of the date of this CCAA, the Partners agree to meet within 10 days to discuss the court order. If necessary, the Partners agree to discuss amending the CCAA in order to meet the requirements of the court order while preserving the CCAA to the maximum extent practicable.

20. Permit Suspension or Revocation

The Service may suspend or revoke the permit for cause in accordance with the laws and regulations in force at the time of such suspension or revocation (50 CFR 13.28(a)). The Service may also, as a last resort, revoke the permit if continuation of permitted activities would likely result in jeopardy to the covered species (50 CFR 17.22/32(d)(7)). The Service will revoke the permit because of jeopardy concerns only after first implementing all practicable measures to

remedy the situation, including consultation with the Cooperators (ESA § 7(a)(2))(50 CFR 402.02).

21. Remedies

Each Partner shall have all remedies otherwise available to enforce the terms of the CCAA and the permit. No Partner shall be liable in damages for any breach of this CCAA, any performance or failure to perform an obligation under this CCAA, or any other cause of action arising from this CCAA, notwithstanding the Service's discretion to suspend or revoke a permit as defined in the previous section.

22. Dispute Resolution

The Partners agree to work together in good faith to resolve any disputes, using dispute resolution procedures agreed upon by all Partners.

23. Succession and Transfer

This CCAA shall be binding on and shall inure to the benefit of Vermejo Park Ranch and its respective successors and transferees (i.e., new owners) in accordance with applicable regulations (50 CFR 13.24 and 13.25). The rights and obligations under this CCAA shall run with the ownership of the covered lands and waters on Vermejo Park Ranch and are transferable to subsequent non-Federal property owners pursuant to 50 CFR 13.25. The enhancement of survival permit issued to Vermejo Park Ranch is also transferable to the new owner(s) pursuant to 50 CFR 13.25. If the CCAA and permit are transferred, the new owner(s) will have the same rights and obligations with respect to their portion of the covered lands and waters as the original owner. The new owner(s) also will have the option of receiving CCAA assurances by signing a new CCAA and receiving a new permit. Vermejo Park Ranch shall notify the Service in writing of any transfer of ownership within 30 days, so that the Service can attempt to contact the new owner, explain the basic responsibilities applicable to the covered lands and waters, and seek to interest the new owner in signing the existing CCAA or a new one to benefit Rio Grande cutthroat trout on their portion of the covered lands and waters. Assignment or transfer of the permit shall be governed by Federal statutes and Service regulations in force at the time.

24. Availability of Funds

Implementation of this CCAA is subject to the requirements of the Anti-Deficiency Act (31 U.S.C. 1341) and the availability of appropriated funds. Nothing in this CCAA will be construed by the Partners to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Cooperators acknowledge that the Service will not be required under this CCAA to expend any Federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

The terms of this CCAA are contingent upon sufficient appropriations and authorization by the New Mexico State Legislature for the performance of this CCAA by NMDGF. If sufficient appropriations and authorization are not made by the Legislature, participation in this CCAA by

NMDGF may be terminated or limited upon written notice by the NMDGF to all other Partners. NMDGF's decision as to whether such sufficient appropriations are available shall be accepted by all other Partners and shall be final.

It is understood that all funds expended by CDPW in accordance with this CCAA are subject to approval by the Colorado State Legislature. This instrument is neither a fiscal nor a funding obligation document. If sufficient funding and authorization are not provided by the Legislature, participation in this CCAA by CDPW may be terminated or limited upon written notice by the CDPW to all other Partners. CDPW's decision as to whether sufficient funding or authorization are available shall be accepted by all other Partners and shall be final.

Vermejo Park Ranch's full implementation and participation in this CCAA is contingent on sufficient annual funding and authorization by Vermejo Park Ranch management regarding the use of these funds for performance of this CCAA. If sufficient funding and authorization are not provided by Vermejo Park Ranch management, participation in this CCAA by Vermejo Park Ranch may be terminated or limited upon written notice by Vermejo Park Ranch to all other Partners. Vermejo Park Ranch's decision as to whether such funds and authorization are available shall be accepted by all other Partners and shall be final.

25. Relationship to Other Agreements

This CCAA stemmed from the Memorandum of Understanding (MOU) between NMDGF and Vermejo Park Ranch, among others, signed in October 2003. Other agreements and documents used as background on which this CCAA is founded include: a rangewide Conservation Agreement between CDPW, NMDGF, the U.S. Forest Service, the Service, the Bureau of Land Management, the National Park Service, and the Jicarilla Apache Nation, dated June 2003; and the statewide Conservation Agreement for Rio Grande cutthroat trout with the U.S. Forest Service within New Mexico dated April 15, 2003 and renewed in October 2009 (Rio Grande Cutthroat Trout Conservation Team 2009). These and all other agreements and documents shall remain in force. If any conflict arises between this CCAA and the aforementioned agreements and documents, the aforementioned documents and agreements shall prevail unless and until one or more of the covered species are listed under the ESA, at which time the terms and conditions of the permit shall prevail. All other terms of the aforementioned documents shall remain in full force.

26. No Third-Party Beneficiaries

This CCAA does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this CCAA to maintain a suit for personal injuries or damages pursuant to the provisions of this CCAA. The duties, obligations, and responsibilities of the Partners to this CCAA with respect to third parties shall remain as imposed under existing law.

27. Notices and Reports

Any notices and reports to the Service, including monitoring and annual reports, required by this CCAA shall be delivered to the persons listed below and all other Cooperators:

Field Supervisor
USFWS
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113

Regional Director
USFWS
PO Box 1306 – Room 4102
Albuquerque, New Mexico 87103

28. Signatures

This Candidate Conservation Agreement with Assurances, (TE-224081-0) effective and binding on the date of last signature below, is between: New Mexico Department of Game and Fish, Colorado Department of Wildlife, Vermejo Park, LLC d/b/a Vermejo Park Ranch (Cooperators), and the U.S. Fish and Wildlife Service:

James D Lane

New Mexico Department of Game and Fish
Director

6/13/13
Date

JUN 1 8 2013

Colorado Division of Parks and Wildlife
Director

Date

JUN 1 8 2013

V.P.

Vermejo Park, LLC d/b/a Vermejo Park Ranch Date

JUN 21 2013

U. S. Fish and Wildlife Service
Deputy Regional Director – Southwest Region

Date

XI. References

Alves, J.E., K.A. Patten, D.E. Brauch, and P.M. Jones. 2007. Range-wide status of Rio Grande cutthroat trout (*Oncorhynchus clarki viginalis*): 2007. An unpublished document and Access database submitted to the U.S. Fish and Wildlife Service in response to the request for information on Rio Grande cutthroat trout.

Alves, J.E., K.A. Patten, D.E. Brauch, and P.M. Jones. 2008. Range-wide status of Rio Grande cutthroat trout (*Oncorhynchus clarki viginalis*): 2008. An unpublished status assessment and Access database developed by the Rio Grande cutthroat trout conservation team.

Behnke, R. J. 1992. Native trout of western North America. American Fisheries Society Monograph 6. Bethesda, Maryland.

New Mexico Department of Game and Fish (NMDGF). 2002. Long range plan for the management of Rio Grande cutthroat trout in New Mexico. New Mexico Department of Game and Fish, Santa Fe, New Mexico. 64 pp.

New Mexico Department of Game and Fish (NMDGF). 2005. Project Implementation Plan for the Restoration of the Native Fish Community to the Upper Rio Costilla Watershed. Santa Fe, New Mexico 6 pgs.

Poff, N. L., M. M. Brinson, and J. W. Day, Jr. 2002. Aquatic ecosystems and global climate change. Pew Center on Global Climate Change. Available at: http://www.pewclimate.org/docUploads/aquatic.pdf.

Rio Grande Cutthroat Trout Conservation Team. 2009. Conservation agreement for Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*) in the states of Colorado and New Mexico. Colorado Division of Wildlife, Fort Collins.

Sublette, J. E., M. D. Hatch, and M. Sublette. 1990. The fishes of New Mexico. University of New Mexico Press, Albuquerque.
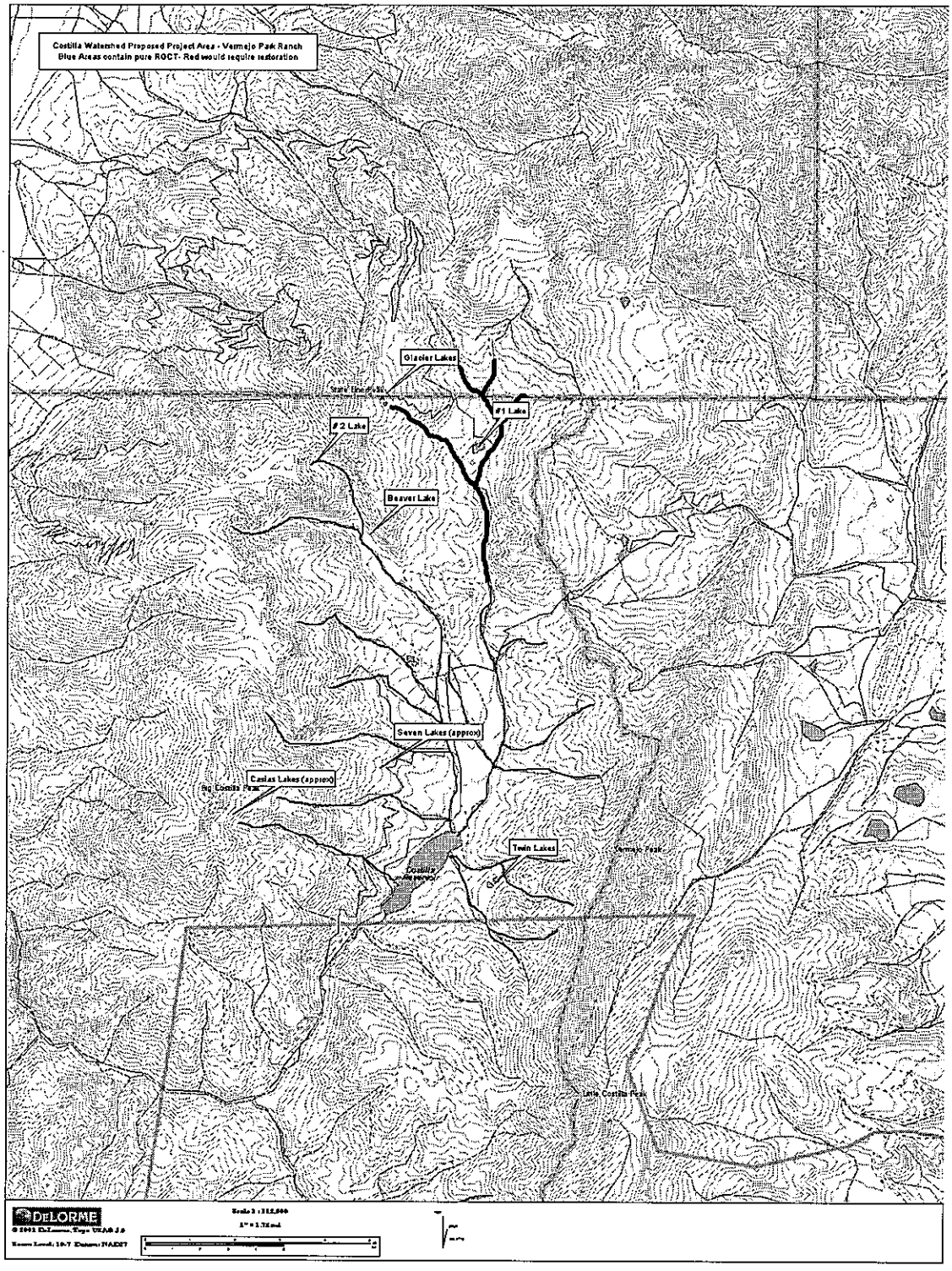
Figure 1 – Covered lands and waters