



February 4, 2014

***Via Federal Express or
Certified Mail Return Receipt Requested***

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**RE: Notice of Intent to Sue the U.S. Bureau of Reclamation for Violations of the
Endangered Species Act Related to its Water Management and River Maintenance
Activities in the Middle Rio Grande Basin in New Mexico**

Dear Commissioner Connor, Area Manager Hamman, Secretary Jewell, Director Ashe and
Regional Director Tuggle:

In accordance with the 60-day notice requirement of Section 11(g) of the Endangered Species Act (“ESA” or “Act”), 16 U.S.C. § 1540(g), you are hereby notified that WildEarth Guardians (“Guardians”) intends to bring a civil action against the U.S. Bureau of Reclamation (“Reclamation”), through the above-named officials, for violating sections 7 and 9 of the ESA, 16 U.S.C. § 1536 and 1538 and its implementing regulations, 50 C.F.R. § 402 *et seq.*: (1) by failing to ensure that Reclamation’s water management and river maintenance activities are not likely to jeopardize the continued existence of the Rio Grande silvery minnow (*Hybognathus amarus*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Pecos sunflower (*Helianthus paradoxus*), interior least tern (*Sternula antillarum*), New Mexico meadow jumping

mouse (*Zapus hudsonius luteus*), and/or yellow-billed cuckoo (*Coccyzus americanus*) or result in the destruction or adverse modification of the silvery minnow and willow flycatchers' designated critical habitat; (2) by making irreversible or irretrievable commitment(s) of resources foreclosing the formulation or implementation of any reasonable and prudent alternative measures; (3) by causing ongoing and imminent future "take" without a permit authorized by law of the endangered silvery minnow and willow flycatcher; and (4) by causing ongoing and future imminent "take" without a permit authorized by law of the endangered silvery minnow and willow flycatcher by destroying or adversely modifying their designated critical habitat as defined in 50 C.F.R. § 402.02. *See* 16 U.S.C. §§ 1536(a)(2), 1536(d) and 1538(g).

I. ESA Requirements

In 1973, Congress enacted the Endangered Species Act to provide "a program for the conservation of . . . endangered species and threatened species" and "a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b). In enacting the statute, the plain intent of Congress was "to halt and reverse the trend towards species extinction, whatever the cost." *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 184, 98 S.Ct. 2279 (1978).

Section 2(c) of the ESA establishes that it is " . . . the policy of Congress that all Federal . . . agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of" the ESA. 16 U.S.C. § 1531(c)(1). To implement this policy, section 7(a)(2) of the ESA requires that each federal agency, including Reclamation, consult with the U.S. Fish and Wildlife Service ("Service") to insure that any action authorized, funded, or carried out by the agency is not likely to 1) jeopardize the continued existence of any threatened or endangered species or 2) result in the destruction or adverse modification of the critical habitat of such species. 16 U.S.C. § 1536(a)(2). "Action" is broadly defined to mean "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies" and includes "actions directly or indirectly causing modifications to the land, water, or air." 50 C.F.R. § 402.02.

For federal actions, the federal agency must request from the Service a determination of whether any listed or proposed species may be present in the area of the agency action. 16 U.S.C. § 1536(c)(1). If listed or proposed species may be present, the federal agency must prepare a "biological assessment" to determine whether the listed species may be affected by the proposed action. *See id.*; 50 C.F.R. § 402.12. If the agency determines that its proposed action "may affect" any listed species or its critical habitat, the agency must engage in "formal consultation" with the Service. 50 C.F.R. § 402.14; *see also*, 51 Fed. Reg. 19,926, 19,949 (June 3, 1986) (explaining that "may affect" broadly includes "[a]ny possible effect, whether beneficial benign, adverse or of an undetermined character").

After formal consultation, the Service issues a biological opinion to explain whether the agency action is likely to "jeopardize" any species' existence. 16 U.S.C. § 1536(a)(2). The biological opinion must include a summary of the information on which it is based and must

adequately detail and assess how the proposed action affects listed species. 50 C.F.R. § 402.14(h). If the action is likely to cause jeopardy, then the biological opinion shall specify reasonable and prudent alternatives that avoid jeopardy.¹ *See* 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)(3). If the Service concludes that the action or the implementation of reasonable and prudent alternatives will not cause jeopardy in violation of section 7(a)(2), the Service will issue an incidental take statement that specifies “the impact, i.e., the amount or extent, of . . . incidental taking” that may occur. *See* 50 C.F.R. § 402.14(i)(1). The ESA requires agencies to use the best available science when conducting their analysis. *See* 16 U.S.C. § 1536(a)(2).

However, an agency’s consultation duties do not end with the issuance of a biological opinion. Instead, an agency must reinitiate consultation when: 1) the amount of take specified in the incidental take statement is exceeded, 2) new information reveals that the action may have effects not previously considered, 3) the action is modified in a way not previously considered, or 4) “[i]f a new species is listed or critical habitat designated that may be affected by the identified action.” *See* 50 C.F.R. § 402.16.

After consultation is initiated (or reinitiated pursuant to one of the triggers set forth in the paragraph immediately preceding), ESA section 7(d) prohibits the agency or any permittee from “mak[ing] any irreversible or irretrievable commitment of resources” toward a project that would “foreclos[e] the formulation or implementation of any reasonable and prudent alternative measures.” 16 U.S.C. § 1536(d). The section 7(d) prohibition “is in force during the consultation process and continues until the requirements of section 7(a)(2) are satisfied.” 50 C.F.R. § 402.09.

Additionally, section 9 of the ESA prohibits the “take” of all listed endangered species. 16 U.S.C. § 1538(a)(1)(B). The term “take” means “to harass, harm, . . . wound, kill, trap, [or] capture” an endangered species.² *Id.* § 1532(19). “Congress intended to define ‘take’ in the ‘broadest possible manner to include every conceivable way’ in which any person could harm or kill wildlife.” *See Aransas Project v. Shaw*, 930 F.Supp.2d 716, 726 (S.D. Texas 2013).

It is also unlawful for any “person” to “cause [an ESA violation] to be committed,” and thus the ESA prohibits a governmental agency from authorizing any activity resulting in take. *See* 16 U.S.C. § 1538(g); *see also, e.g., Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997). Without a valid biological opinion and an incidental take statement from the Service covering the

¹ *Bennett v. Spear*, 520 U.S. 154, 170, 117 S. Ct. 1154, 1165, (1997) (a biological opinion may be advisory in nature, but the agency disregards “at its own peril”).

² “Harass” means “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. “Harm” means “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” *Id.*

activity's take of an endangered species, an action agency is not authorized to "take" or jeopardize *any* members of that species.

The ESA provides for citizen enforcement of the provisions of the Act. To enforce sections 7 and 9 of the ESA, 16 U.S.C. § 1536(a)(2), (d) and 1538(g), "any person may commence a civil suit on his own behalf . . . to enjoin any person, including the United States and any other governmental instrumentality or agency, who is alleged to be in violation of any provision of the this chapter." 16 U.S.C. §1540(g)(1)(A).

II. Factual Background

A. Endangered Species Imperiled by Reclamation's Water Management Activities in the Middle Rio Grande

i. Rio Grande silvery minnow (*Hybognathus amarus*)

The Rio Grande silvery minnow is a "small, relatively heavy-bodied minnow, round to ovate in cross-section, with moderately small eyes and a small, slightly oblique mouth." *See Rio Grande Silvery Minnow Recovery Plan*, First Revision 2010 (Originally Approved on July 8, 1999) at 5. Adults reach about 4 inches in length and exhibit a light greenish-yellow color. *Id.* The silvery minnow is a "pelagic spawner that produces thousands of semibuoyant, non-adhesive eggs that passively drift while developing." *Id.* at 6. Reproduction in the silvery minnow is triggered by and corresponds with high or peak spring flows that historically occurred in May or June as a result of snowmelt runoff. *Id.* at 7.

The silvery minnow was historically one of the most abundant and widespread species in the entire Rio Grande, occurring from Espanola, New Mexico to the Gulf of Mexico and in much of the Pecos River. *Id.* at 15. The silvery minnow has been extirpated from more than 95% of its historical range and today only occupies a 174-mile stretch of the river in the middle Rio Grande from Cochiti Dam to Elephant Butte Reservoir.³ *Id.* at 2.

The Service listed the Rio Grande silvery minnow as endangered under the ESA in 1994 and designated critical habitat for the entire reach of the middle Rio Grande in 1999. *See* 59 Fed. Reg. 36988 (7/20/94); 64 Fed. Reg. 36,274 (7/6/99). The Secretary of the Interior developed a recovery plan for the silvery minnow in 1999 and revised it in 2010. *See* 75 Fed. Reg. 7625 (2/22/10). The recovery plan attributes the decline of the Rio Grande silvery minnow to the "destruction and modification of its habitat due to dewatering and diversion of water, water impoundment, and modification of the river (channelization)" among other factors. 2010 *Recovery Plan* at 2.

³ The silvery minnow was reintroduced into the Rio Grande near Big Bend, Texas in 2008. This population is considered "a nonessential, experimental population under section 10(j) of the ESA (73 FR 74357)." 2010 *Recovery Plan* at 16.

Since 2009, lack of high spring runoff combined with summer drying have resulted in a decline of silvery minnow populations.⁴ A 2013 report indicated that the silvery minnow population is at its lowest level since comprehensive surveys began in 1993. *See* Minnow Action Team Report dated May 16, 2013 at 6. The decline in population has resulted from three consecutive years (2011-2013) without a peak flow in the middle Rio Grande to trigger reproduction and significant river drying (one-third of the minnow's critical habitat in 2012)⁵ during the irrigation season. In 2012, such conditions resulted in no minnows being discovered in population surveys in October. Similarly, surveys reported only three minnows present in population monitoring conducted in October of 2013. *Id.*

ii. Southwestern willow flycatcher (*Empidonax traillii extimus*)

The Southwestern willow flycatcher is a small migratory bird approximately six inches long, weighing about half an ounce. *See* 2002 *Southwestern Willow Flycatcher Final Recovery Plan* dated August 30, 2002 at 4. "It has a grayish-green back and wings, whitish throat, light grey-olive breast, and pale yellowish belly." *Id.* The willow flycatcher inhabits the streamside and wetland thickets of New Mexico, Arizona, west Texas, and southern portions of Nevada, Utah, California, and Colorado. *Id.* at 7. The willow flycatcher's breeding habitat includes "patchy to dense riparian habitats along streams or other wetlands, near or adjacent to surface water or underlain by saturated soil." *Id.* at 11.

On February 27, 1995, the Service listed the Southwestern willow flycatcher as endangered and designated critical habitat on July 22, 1997. *See* 60 Fed. Reg. 10694 (2/27/95); 62 Fed. Reg. 39129 (7/22/97). At the time of listing, the known flycatcher population was estimated between 300 and 500 pairs. *Id.* In its listing rule, the Service found that the decline of the Southwestern willow flycatcher resulted from loss of habitat, including adverse modifications of riparian habitat necessary for the breeding and successful reproduction of the flycatcher as a result of human development, channelization, changes in surface water hydrologic regimes, introduction of alien species, and other activities. *Id.* In 2002, the Secretary of the Interior released a recovery plan setting forth the measures necessary to recover the species. *See* 2002 *Southwestern Willow Flycatcher Final Recovery Plan*.

Over the years, the Service modified its critical habitat designation for the flycatcher on several occasions. *See* 62 Fed. Reg. 44228 (8/20/97) and 70 Fed. Reg. 60886 (10/19/05). In 2013, the Service revised the critical habitat designation for the willow flycatcher to include 112 miles

⁴ *See* Dudley, Robert K., Adam L. Barkalow, and Steven P. Platania, Spawning Periodicity of Rio Grande Silvery Minnow During 2012 (October 12, 2012) at 38-39 ("The loss of individuals from downstream reaches during river drying events is particularly problematic as these are the areas that most frequently and consistently support the highest densities of Rio Grande silvery minnows").

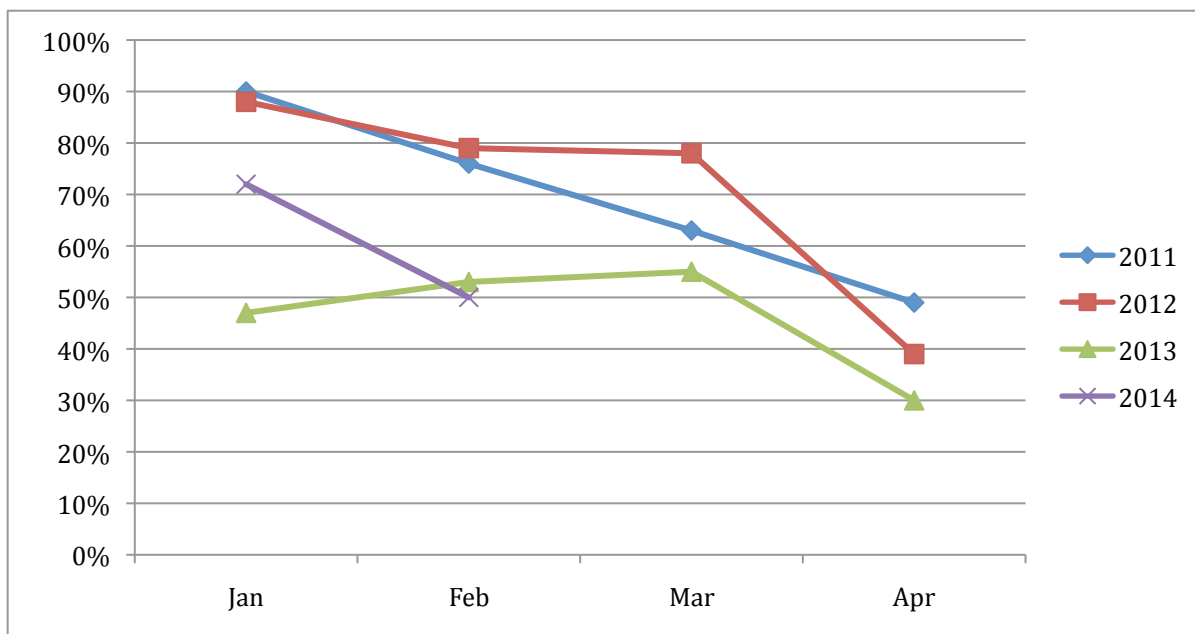
⁵ Approximately 21 percent (37 miles) of the silvery minnow's critical habitat dried in 2013. *See* 2013 Preliminary Salvage Data of the Service.

in the middle Rio Grande between the Valencia-Bernalillo county line and the upper part of the Elephant Butte Reservoir in Socorro County, New Mexico. *See* 78 Fed. Reg. 344 (1/3/13).

B. Natural Resources Conservation Service’s 2014 Forecast for the Rio Grande

On January 1, 2014, the Natural Resources Conservation Service (“NRCS”) issued its first set of monthly streamflow forecasts for New Mexico for 2014. *See New Mexico Basin Outlook Report* dated January 1, 2014. The NRCS forecast for January predicts below normal streamflow (72 percent of average) at the Rio Grande at Otowi Bridge (USGS Station No. 08313000); the preliminary forecast for February indicates a drop to 50% of average. Figure 1 demonstrates the NRCS streamflow forecasts at the Rio Grande at Otowi Bridge gauge for the months of January through April and covering the period from 2011 to 2014 (2014 only includes the January and preliminary February forecasts).

**Figure 1. NRCS Streamflow Forecasts
at Rio Grande near Otowi Bridge Gauge 2011-2014**



A clear downward trend exists for the Rio Grande at Otowi forecasts between January and April during the period from 2011 to 2013. While the January 2014 forecast of 72 percent of average is not as dire as the forecast in 2013, it is still well below the forecasted streamflow in 2011 and 2012 (also very dry years in the middle Rio Grande). However, the dramatic drop from 70 percent in January 2014 to 50 percent in February combined with the fact that New Mexico’s reservoirs contain little stored water could mean another perilous summer for the Rio Grande silvery minnow and Southwestern willow flycatcher in the middle Rio Grande.

C. Reclamation's Consultation History in the Middle Rio Grande

i. 2003 Biological Opinion Issued by the Service

Reclamation began consulting with the Service over its water management and river maintenance activities in the middle Rio Grande in 1996. Over the next seven years, the Service issued three separate biological opinions in 2001, 2002 and 2003 collectively to Reclamation, the U.S. Army Corps of Engineers ("Corps") and the non-federal parties.⁶ Like its biological opinions in 2001 and 2002, the Service's March 17, 2003 biological opinion⁷ ("2003 Biological Opinion") concluded that Reclamation's water and river maintenance operations and the related actions of the non-federal parties "are *likely to jeopardize* the continued existence of the silvery minnow and the flycatcher and adversely modify critical habitat of the silvery minnow."⁸ 2003 Biological Opinion at 84-88 (emphasis added). As a result of its "jeopardy" determination, the Service developed a reasonable and prudent alternative ("RPA"), an incidental take statement ("ITS"), reasonable and prudent measures ("RPMs"), terms and conditions, and conservation recommendations to provide a guide for water management in the middle Rio Grande over the next decade. *Id.* at 102-110.

The RPA detailed a number of actions that, if implemented together, the Service believed would mitigate the significant negative effects on the listed species and alleviate jeopardy. *Id.* at 87-102. Those mandatory actions incorporate: (1) water operations elements, including a spawning spike to cue reproduction in the silvery minnow (Element A), management of available water to create habitat and allow species to persist in less than ideal conditions (Element B), and maintenance of minimum flows in the river during certain times of the year depending on the hydrologic conditions that year (Elements E to N); (2) habitat improvement elements, including restoring river connectivity to allow upstream movement of silvery minnow throughout the middle Rio Grande (Element R), creating riparian habitat and low velocity in-channel aquatic habitat throughout the action area (Element S), increasing the safe channel capacity of the river near San Marcial to allow for essential flooding flows (Element U), and completing the Cochiti environmental baseline study and investigating feasibility of sediment transport from Cochiti Lake (Element W); (3) water quality elements, and (4) reporting elements, among other requirements. *Id.*

⁶ The non-federal parties included the State of New Mexico and the Middle Rio Grande Conservancy District.

⁷ Biological and Conference Opinions on the Effects of Actions Associated with the Programmatic Biological Assessment of the Bureau of Reclamation's Water and River Maintenance Operations, U.S. Army Corps of Engineers' Flood Control Operation, and Related Non-Federal Actions on the Middle Rio Grande, New Mexico (Consultation #2-22-03-F-0129).

⁸ "Jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." *See* 50 C.F.R. § 402.02.

In addition to the RPA, the original ITS included in the 2003 Biological Opinion provided the estimated number of silvery minnows and flycatcher territories the agencies could “take” without causing “jeopardy” to the species. *Id.* at 102-105. On August 15, 2005, the Service amended the 2003 Biological Opinion to allow for “take” to be estimated for the silvery minnow on an annual basis (April 1 to March 31). *See* Letter of the Service dated June 15, 2006 (“2006 Amendment”). The Service calculates the level of take each year as a proportion of the 38,000 minnows originally included in the ITS. *Id.* at 3. By April 1 of each year, the Service must transmit a letter to Reclamation, the Corps and the non-federal parties specifying the estimated take for the year. *Id.* at 2.

As required by 50 C.F.R. § 402.14(i), the Service specifically integrated the RPA’s requirements into both the original ITS and the ITS as modified by the 2006 Amendment. The ITS in the 2003 Biological Opinion provides that “[t]he Service has developed the following incidental take statement *based on the premise that the RPA will be implemented.*” *See* 2003 Biological Opinion at 103 (emphasis added). The original ITS also declared “this level of anticipated take is not likely to result in jeopardy to the silvery minnow [and flycatcher] *when the RPA is implemented.*” *Id.* at 104-105 (emphasis added). The ITS in the 2006 amendment provides “[t]he Service has determined that the level of take in this amended ITS is not likely to result in jeopardy to the silvery minnow *with implementation of the [RPA].*” 2006 Amendment at 3. Therefore, the exception to the “take” prohibition in the ESA provided in the ITS for the 2003 Biological Opinion as amended assumes implementation of the RPA by Reclamation and other federal and non-federal agencies in the middle Rio Grande. Thus, failed implementation of the RPA by Reclamation and other agencies invalidates the coverage provided by the ITS and opens the agencies to “take” liability under section 9 of the ESA.

ii. Reinitiation of Consultation Upon Expiration of the 2003 Biological Opinion

The 2003 Biological Opinion remained valid for a 10-year term ending on February 28, 2013. *Id.* at 110. However, the 2003 Biological Opinion contains a specific provision that appears to provide a unique opportunity for the agencies to ensure continued compliance with the ESA upon reinitiation of consultation. *Id.* The *Reinitiation Notice* provision provides “[c]onsultation must be reinitiated prior to the expiration of this biological opinion to ensure continued compliance with sections 7 and 9 of the ESA.” *Id.* While the validity of this extension under the ESA is questionable, any potential coverage that stems from reinitiation of consultation must be linked to compliance with the RPA in the 2003 Biological Opinion and the associated ITS. As when the 2003 Biological Opinion was current, it can only shield the agencies from ESA liability when the agencies are actually complying with the RPA which was developed to ensure the activities of Reclamation, the Corps and the non-federal parties do not jeopardize the continued existence of the species.

On February 22, 2013 (prior to the expiration of the 2003 Biological Opinion), the Service reinitiated consultation with Reclamation and the non-federal parties (Consultation

#02ENNM00-2013-F-0033) concerning the effects of its proposed water management and river maintenance activities on the listed species.⁹ *Id.* During the 2013 irrigation season, Reclamation and the non-federal parties operated pursuant to this so-called “extension” of the 2003 Biological Opinion and RPA. In correspondence with Reclamation at the beginning of the irrigation season, the Service emphasized that “[d]uring this interim period before new biological opinions are issued, *compliance with the 2003 BO remains necessary to alleviate jeopardy to the listed species and adverse modification to designated critical habitat.*” See April 2, 2013 Letter of the Service transmitting 2013 ITS at 1 (emphasis added).

To date, the Service continues to consult with Reclamation and the non-federal parties regarding their activities in the middle Rio Grande.¹⁰ Until recently, the Service anticipated issuing a new biological opinion to Reclamation and the non-federal parties, the Corps and the Bosque del Apache National Wildlife Refuge before the 2014 irrigation season commences on March 1. However, on November 26, 2013, the Corps withdrew from consultation with the Service creating delay and uncertainty regarding the future of a new biological opinion for the middle Rio Grande.

iii. 2013 Modifications of 2003 Biological Opinion RPA

In November of 2012, the Service requested the Middle Rio Grande Endangered Species Collaborative Program (“Collaborative Program”) develop options for managing water “for the persistence of endangered species during the upcoming irrigation season, given the severity of the drought and the poor population status of the Rio Grande silvery minnow.” See May 31, 2013 Memorandum of the Service. The Collaborative Program formed the minnow action team¹¹ and it began meeting regularly to determine potential water management options for 2013. *Id.*

On April 2, 2013, the Service provided its annual ITS to Reclamation and the Corps setting forth the Service’s “determination of flow targets and estimated incidental take for the 2013 irrigation season, pursuant to the Service’s March 17, 2003, Biological Opinion” (“2013 ITS”). See 2013 ITS at 1. The Service notified the agencies that the dry year flow targets (RPA Elements E through G) of the 2003 Biological Opinion remained in effect requiring the agencies to (1) provide continuous flows from Cochiti dam to Elephant Butte from November 16 to June 15 (Element E); (2) provide year-round continuous flows from Cochiti dam to Isleta diversion dam with a minimum flow of 100 cubic feet per second (“cfs”) at the Central gauge near

⁹ On the same day, the Service also reinitiated consultation with the Corps (Consultation #02ENNM00-2013-F-0034) and the Bosque del Apache National Wildlife Refuge (Consultation #02ENNM00-2013-F-0035).

¹⁰ The Service also continues to consult with the Bosque del Apache National Wildlife Refuge.

¹¹ The minnow action team consists of representatives of the New Mexico Interstate Stream Commission, the Middle Rio Grande Conservancy District, Albuquerque-Bernalillo County Water Utility Authority, City of Albuquerque Bio Park, New Mexico Department of Game and Fish, Santa Ana Pueblo, the Service, Reclamation, Bosque del Apache National Wildlife Refuge and the Corps. 2013 *Minnow Action Team Report* at 3.

Albuquerque;¹² and (3) pump from the low flow conveyance canal to manage river drying below San Acacia diversion dam for the benefit of the flycatchers. *Id.* at 1-2.

In addition, the Service set out the amount of permitted “take” due to channel drying for the 2013 irrigation season using the formulas established in the amendment to the 2003 Biological Opinion. *Id.* at 2. The Service permitted take of 2,746 minnows and clarified that “[i]f observed mortality (the number of dead silvery minnows found) exceeds 55 individuals (2,746 divided by 50), the level of anticipated take will have been exceeded.” *Id.* The Service’s take estimate was the lowest it had ever been due to the fact that in the fall of 2012 population surveys discovered no minnows.

On May 16, 2013, the minnow action team presented a proposal for “emergency measures” to the Executive Committee of the Collaborative Program. *See* Minnow Action Team Report dated May 16, 2013. These “emergency actions” included the elimination of the minimum flow requirements of 100 cfs at the Central gauge (Element F of the RPA) in exchange for maintaining some suitable habitat in each reach of the middle Rio Grande (Angostura, Isleta and San Acacia reaches). *Id.* The minnow action team estimated that—without implementation of the “emergency measures”—utilizing Reclamation’s “supplemental water” to maintain the minimum flow requirements would exhaust the supply by June 15th. *Id.* However, implementing the “emergency measures” would require an amendment to the RPA of the 2003 Biological Opinion. The minimum flow requirements serve as one of the key features in the RPA that avoids jeopardy to the silvery minnow and willow flycatcher. Notwithstanding this fact, the Executive Committee unanimously endorsed these measures.

On May 23, 2013, Reclamation notified the Service that due to drought conditions in the middle Rio Grande it did not believe it could comply with the dry year flow targets required by the RPA in the 2003 Biological Opinion and anticipated that the “take” estimate set out in the ITS for 2013 would be exceeded. Reclamation proposed implementing the minnow action team’s “emergency actions” for the 2013 irrigation season and requested the Service’s approval.

On May 31, 2013, in a somewhat cryptic memorandum, the Service appeared to endorse implementation of the emergency drought measures proposed by Reclamation. The Service confirmed its understanding in the following paragraph:

As such, we understand that MRG flows are scheduled to be ramped down beginning June 1, 2013, with a goal of conserving water to maintain specific refugial habitats for the silvery minnow in the Angostura, Isleta, San Acacia Reaches, and in the Temp Channel. We understand that utilizing MRGCD infrastructure to route water around the Isleta Reach is paramount to the success of this strategy. The Service confirms that starting river recession between May

¹² The “Central gauge” is also known as the USGS Station No. 08330000, Rio Grande at Albuquerque, New Mexico located in Bernalillo County, New Mexico.

25 and June 5, 2013, is within the dates contemplated by the MAT and reflected in their recommendations. The Service believes that action you are taking will have the best possible outcome for the Rio Grande silvery minnow, Southwestern willow flycatcher, and the New Mexico jumping mouse given the severe circumstances associated with the 2013 drought.

May 31, 2013 Memorandum of the Service at 2.

The Service did not explicitly waive the minimum flow requirements in RPA Element F of the 2003 Biological Opinion, but allowed the “emergency measures” to be implemented without any further instruction as to whether or under what conditions the normal operations would resume as hydrologic conditions changed or the impact of such operation on the level of take specified in the 2013 ITS. This action or inaction by the Service does not shield Reclamation from its responsibility to prevent jeopardy to the silvery minnow or from liability for its violations of section 9 of the ESA.

According to its 2013 salvage data, the Service reported 234 dead minnows during the 2013 irrigations season; 230 of the deaths occurred prior to July 1, 2013. Reclamation exceeded the permitted take in the 2013 ITS (observed mortality of 55 individuals) by 179 silvery minnows (4 times the permitted take). Neither Reclamation nor the Service reinitiated consultation specifically to address Reclamation's violation of the level of take set out in the 2013 ITS.

III. Reclamation's Water Management and River Maintenance Activities are Subject to Liability under Section 7 and 9 of the ESA

As discussed above, the 2003 Biological Opinion expired by its own terms on February 28, 2013. Upon its expiration, any ITS permitting take incidental to the proposed action also became invalid. Thus, Reclamation is operating at its own peril in continuing the agency's water management and river maintenance operations as described in the 2003 Biological Opinion and subject to liability under sections 7 and 9 of the ESA. Even assuming the *Reinitiation Notice* provision of the 2003 Biological Opinion extended the opinion past its expiration, the 2003 Biological Opinion and its ITS have been invalidated by: 1) Reclamation's ongoing failure to implement the RPA required by section 7(a)(2) of the ESA to prevent jeopardy to the minnow and flycatcher; 2) Reclamation's failure in 2013 to comply with the level of take specified in its ITS or reinitiate consultation with the Service; 3) Reclamation's ongoing failure to implement the RPMs and non-discretionary term and conditions of the ITS; and 4) Reclamation's ongoing failure to reinitiate consultation with the Service upon a) exceeding the permitted level of take in the ITS, b) modifying an essential element of the RPA in a way not previously considered by the 2003 Biological Opinion, and c) the Service's revision to the critical habitat of the flycatcher. Therefore, until the Service issues a new biological opinion, Reclamation remains without a valid permit to take any individual silvery minnow or willow flycatcher during the 2014 irrigation season.

A. Failure to Implement the RPA

Since 2003, Reclamation has failed to implement the RPA in numerous significant ways, including: (1) failing to remove or modify dams that fragment river habitat and limit water management opportunities that would benefit the species; (2) failing to implement restoration activities throughout the middle Rio Grande in a manner that is geographically dispersed throughout the action area; (3) violating certain flow requirements that serve to ensure habitat for the silvery minnow and flycatcher within critical reaches of the middle Rio Grande; and (4) failing to provide one-time increase in flows to cue successful spawning in the silvery minnow.¹³ In addition to these ongoing violations of the 2003 Biological Opinion, it is anticipated that Reclamation will commit future violations of these flow provisions during the 2014 irrigation season and beyond. *See* 2014 Rio Grande NRCS forecast, above.

The specific ongoing and potential future violations by Reclamation and the non-federal entities that undermine the validity of the 2003 Biological Opinion are described in more detail below:

i. Failure to Provide Fish Passage at the San Acacia and Isleta Diversion Dams

Reclamation failed to comply with its mandatory duty under the 2003 Biological Opinion to complete fish passage at the San Acacia diversion dam by 2008 and at Isleta diversion dam by 2013 (RPA Element R). 2003 Biological Opinion at 96. The silvery minnow recovery plan and the Biological Opinion both discuss the importance of habitat connectivity to the survival and recovery of the silvery minnow. For example, the 2003 Biological Opinion provides:

The San Acacia and Isleta Diversion Dams are barriers (total or partial) to upstream fish movement. The natural drift of eggs and larvae downstream and over these diversion dams and the inability of adults to recolonize upstream areas effectively fragments and isolates populations in lower river reaches. By providing a mechanism for adults to move upstream without the aid of capture and relocation, we believe significant benefits to the survival of the populations can occur.

Id. at 89. Furthermore, fish passage is listed as a recovery task in the original and updated silvery minnow recovery plans (USFWS 1999, updated 2010). The silvery minnow recovery plan provides in section 2.1.2 as follows:

¹³ Although not detailed in this notice, the Corps has also failed to implement key features of the 2003 Biological Opinion RPA, including its failure to initiate construction on realignment of the San Marcial Railroad Bridge by the September 30, 2008 deadline (Element U of the RPA) and failure to complete the Cochiti baseline study by the deadline of December 31, 2007 (Element W) (although, the study was finally completed in October 2013).

Provide for fish passage at irrigation diversion structures.

Rio Grande silvery minnow eggs and larvae move downstream, potentially stranding fish below barriers (diversion structures). Promoting the ability of Rio Grande silvery minnows to independently disperse between sub-reaches can increase reproduction among sub-populations, thereby increasing effective population size and maximizing the retention of genetic diversity.

The successful design and implementation of fish passage structures (or other diversion facilities that do not block upstream dispersal) could allow Rio Grande silvery minnow to repopulate areas where they were spawned.

Notably in its 2010 recovery plan, the Service rejected the use of “capture and transport” as a suitable interim measure for repopulating upstream reaches.

No factual dispute exists regarding whether fish passage has been completed at the San Acacia or Isleta Diversion Dams by 2008 and 2013, respectively. Reclamation admits its failure to remove or provide fish passage at either of the dams that segment the middle Rio Grande and that the agency continues to violate Element R of the RPA.

ii. Failure to Include Habitat Restoration Projects in the Southern Portion of the Middle Rio Grande

The 2003 Biological Opinion assumed that Reclamation would implement habitat restoration projects throughout the middle Rio Grande “to increase backwaters and oxbows, widen the river channel, and/or lower river banks to produce shallow water habitats, overbank flooding, and regenerating stands of willows and cottonwood to benefit the silvery minnow, the flycatcher, or their habitats.” *See* 2003 Biological Opinion (RPA Element S) at 96-7. Though the 2003 Biological Opinion recognizes that the initial emphasis would be on projects in the northern portion of the middle Rio Grande the Biological Opinion explicitly says that, “restoration will be distributed throughout the action area.” *Id.* at 97. The action area includes the portion of the middle Rio Grande below San Acacia diversion dam. Unfortunately, Reclamation completed only minimal, if any, habitat restoration meeting this definition in the southern portion of the action area. Though the de facto abandonment of the lower reaches by Reclamation, including especially the reach below San Acacia diversion dam, may have been approved for water management that was not the case for restoration projects and activities. As of the date of this notice, Reclamation continues to violate Element S of the 2003 Biological Opinion RPA.

iii. Failure to Provide Continuous River Flows in Middle Rio Grande

In addition to restoring habitat and maintaining river connectivity, the Service included water operations elements in the RPA and found such elements to be essential to preventing

jeopardy to the silvery minnow and willow flycatcher. *Id.* at 93. In dry years,¹⁴ RPA Element E requires Reclamation provide continuous river flows from Cochiti dam to the southern boundary of silvery minnow critical habitat just above Elephant Butte reservoir from November 16 to June 15 of each year. *Id.* at 92. Furthermore, RPA Element F requires Reclamation maintain year-round river flows between Cochiti dam and the Isleta diversion dam with a minimum flow of 100 cfs at the Central gauge. *Id.* at 93.

RPA Elements E and F are at the heart of the 2003 Biological Opinion. Continuous river flows prove important for providing “at least a minimal amount of habitat for adult and juvenile silvery minnows through the summer months and will help to alleviate jeopardy,” and similarly for flycatchers “the presence of surface water is considered one of the most important factors in determining suitable breeding sites.” *Id.* at 93. The Service found it “essential to provide a sufficient amount of habitat to support these silvery minnows and ensure that the primary constituent elements of their critical habitat are available to sustain them.” *Id.* “River drying causes direct mortality to silvery minnow when the pools which they are trapped dry.” 2006 Amendment at 5. In addition, due to the short life cycle of the silvery minnow, any decreased reproductive success over consecutive years can reduce populations to dangerously low levels. *Id.*

In 2003, 2004, 2006, 2011 and 2013, Reclamation and the other action agencies violated RPA Elements E and/or F on several occasions. For example, continuous river flows in the San Acacia reach ceased from May 22 to 27, 2006 over a 4.7 mile stretch of the river killing 38 minnows and resulting in the relocation of an additional 4,220 minnows. 2006 Amendment at 5. On April 22 to 25, 2011, an 8-mile reach within the Bosque del Apache National Wildlife Refuge dried killing 527 minnows. *See 2011 Report to Rio Grande Compact Commission by Reclamation* at 38. Both these events constitute violations of RPA Element E and resulted in the collective mortality of over 550 minnows.

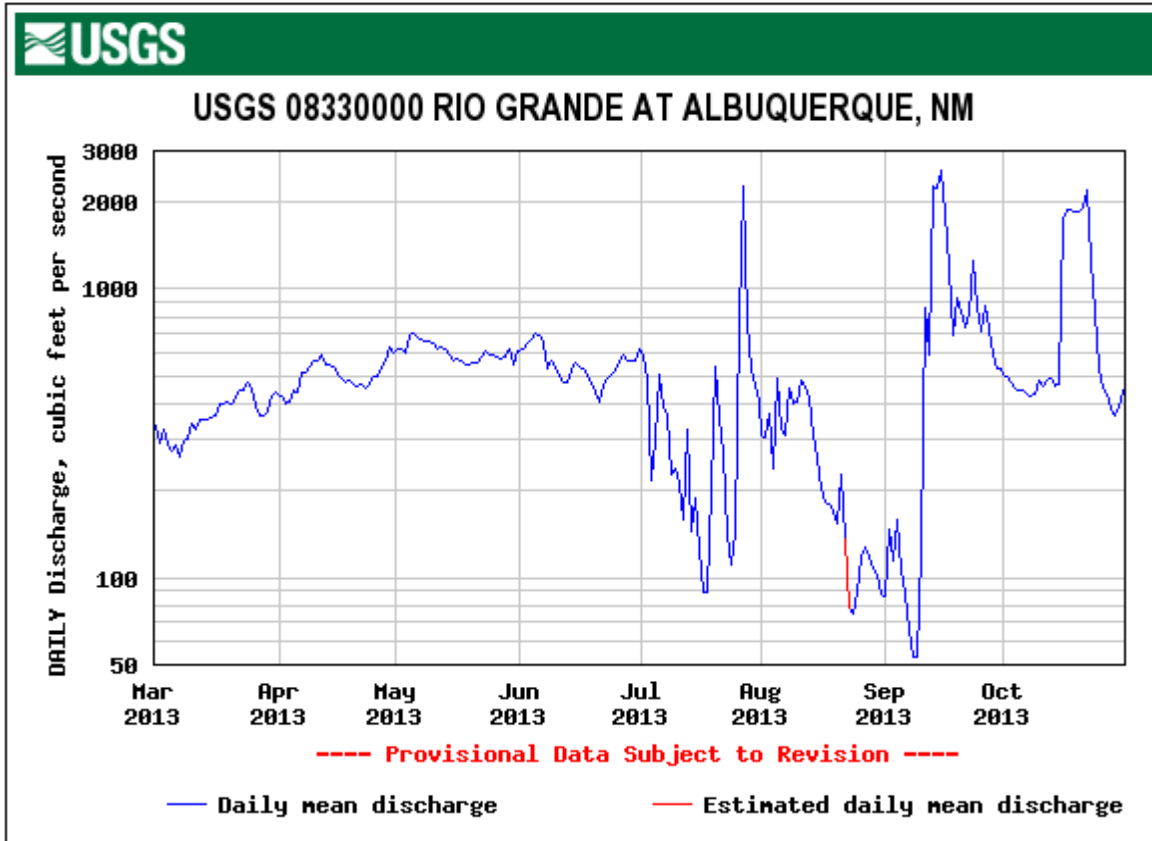
Likewise, Reclamation violated RPA Element F by failing to maintain a minimum flow of 100 cfs at the Central gauge on at least eleven separate days in 2013.¹⁵ *See Table 1*, attached hereto. *Figure 2*, on the next page, shows the streamflow data from the Central gauge from March to October 2013.¹⁶

¹⁴ Dry years are defined as those years where NRCS’s April 1 Streamflow Forecast at Otowi Gauge is less than 80% of average or when Rio Grande Compact Article VII restrictions are in effect (i.e. when there is less than 400,000 acre-feet of usable water in project storage). Average is defined as the average streamflow at Otowi Gauge for 30-year period from 1971 to 2000.

¹⁵ The Central Gauge fell below 100 cfs on July 17 and 18; August 23, 24, 25 and 31; September 1, 6, 7, 8 and 9, 2013 in violation of RPA Element F of the 2003 Biological Opinion.

¹⁶ *See* http://nwis.waterdata.usgs.gov/nm/nwis/uv?cb_00060=on&format=gif_default&period=&begin_date=2013-03-01&end_date=2013-10-31&site_no=08330000.

**Figure 2. USGS Streamflow Data
at Central Gauge from March to October 2013**



Over the past decade, Reclamation has committed violations of RPA Elements E and F on several occasions causing mortality to hundreds of silvery minnow in the Rio Grande. Last year, Reclamation failed to implement the flow requirements in the RPA (under the guise of a waiver by the Service) resulting in numerous violations of RPA Element F and causing the death of over 230 silvery minnows in the month of June. Thus, Based on the projected streamflow for the 2014 irrigation season (similar to those experienced in 2006, 2011 and 2013), future violations of one or both of these mandatory flow requirements by Reclamation are imminent.

iv. Failure to Provide Spawning Spike

From 2011 to 2013, Reclamation and the Corps failed to provide the one-time increase in flows to cue spawning as required by RPA Element A. 2003 Biological Opinion at 91. Due to the Corps' position refusing to "deviate" its operations at Cochiti dam and the uncertainty of flows in April and May 2014, it is reasonably likely that a peak flow will not be generated in the middle Rio Grande again this year. If that occurs, 2014 will be the fourth consecutive year without spawning by the silvery minnow.

A peak flow—as occurred historically in May or June—is another essential component necessary for the survival and recovery of the silvery minnow and willow flycatcher. Such increased flows in the spring induce reproduction in the silvery minnow and creates nesting habitat for the willow flycatchers in flooded areas. *Id.* The Service recognized the importance of such peak flows and included a mandatory requirement that between April 15 and June 15 of each year, the action agencies “shall provide a one-time increase in flows (spawning spike).” *Id.* at 91. The Service emphasized in the 2003 Biological Opinion that “due to the short life cycle of the silvery minnow, any decreased reproductive success over consecutive years can reduce populations to dangerously low levels.” *Id.* at 93. Reclamation has violated and continues to violate RPA Element A of the 2003 Biological Opinion and it is reasonably imminent that the same violation will occur in the spring of 2014 and beyond.

B. Failure to Comply with the Level of Take Specified in the 2013 ITS

Reclamation also failed to stay within the level of take specified by the Service in its 2013 ITS. The Service permitted the take of 2,746 minnows in 2013 with an “observed mortality” of 55 individuals. 2013 ITS at 2. As of July 1, 2013, the Service reported 230 dead minnows as a result of river drying, exceeding the 2013 ITS threshold by 179 minnows (4 times the permitted level of take). Reclamation did not specifically reinitiate consultation with the Service at that time as required by the ESA and its implementing regulations.

C. Failure to Implement Non-Discretionary Terms and Conditions in the ITS

In addition to Reclamation’s failure to implement the RPA and violations of its ITS by exceeding the specified level of take, Reclamation also failed to take the necessary actions to minimize the take of silvery minnows as detailed in the ITS. The ITS provides: “the Service believes the following RPMs are necessary and appropriate to minimize impacts of incidental take of the silvery minnow.” *Id.* at 105. Further, the Service provides “these terms and conditions [implementing the RPMs] are non-discretionary.” *Id.* Therefore, compliance with the terms and conditions “must be achieved in order to be exempt from the prohibitions of section 9 of the ESA.”

First, the ITS specifies in RPM 1 “[a]ction agencies and parties to the consultation shall minimize the take of silvery minnows within the Rio Grande.” *Id.* at 105. Term and condition 1.1 requires Reclamation to “[r]amp down river flows as slowly as possible during the time periods set forth in the RPA to minimize intermittency. Even under worst conditions, every effort shall be made to ensure that no more than 4 miles of river dry per day . . .” *Id.* at 106. Reclamation’s implementation of the minnow action team’s recommendations—to conserve supplemental water—is directly contrary to the mandate of term and condition 1.1. Once flows were “ramped down” on June 1, the river began drying. As of July 1, 2013, 37-miles of the river dried and 230 dead minnows were collected by the Service during its salvage operations. *See* Preliminary Data for 2013 Salvage Report by the Service. Reclamation violated RPM 1 of the 2003 Biological Opinion by taking actions in 2013 that increased river drying and caused take of silvery minnow in excess of its ITS.

Second, RPM 3 provides “[a]ction agencies and parties to the consultation shall minimize the take of silvery minnows and flycatcher from a lack of water availability due to the proposed action.” *Id.* at 105. To implement this provision, terms and conditions 3.1 and 3.2 must be implemented. *Id.* at 106. Term 3.1 requires Reclamation to “continue to seek and release supplemental water from all available sources.” *Id.* at 107. Term 3.2 mandates Reclamation “[d]evelop a plan for acquiring water from willing leasers or sellers to provide supplemental water for the benefit of the species.” *Id.* Reclamation is directed to complete the plan within 18 months from the date of issuance of the 2003 Biological Opinion. *Id.*

As recognized in the 2003 Biological Opinion, river flows prove a crucial factor for survival and recovery of the silvery minnow and willow flycatcher. RPM 3 emphasizes the importance of reallocating water from historic uses back to the river to provide habitat for the listed species. The Service even provided a conservation recommendation suggesting one method for acquiring water (i.e. development of an agricultural forbearance program that could provide additional water for the to benefit the species). *See Id.* at 108 (Conservation Measures 7). While Reclamation secures water each year from San Juan-Chama contractors to benefit the species, the agency has failed to seek supplemental water from *all available sources* as required by the terms and conditions of the ITS. *Id.* at 107 (emphasis added). All available sources includes seeking water from or developing an agricultural water leasing program in the middle Rio Grande. Reclamation fails to comply with the terms and conditions required for the implementation of RPM 3. The ITS cannot protect Reclamation from liability under section 9 if the RPMs and the non-discretionary terms and conditions are not fully implemented.

D. Failure to Reinitiate Consultation

As required by 50 C.F.R. § 402.16, the 2003 Biological Opinion provides that Reclamation must reinitiate consultation when: 1) the amount of take specified in the incidental take statement is exceeded, 2) new information reveals that the action may have effects not previously considered, 3) the action is modified in a way not previously considered, or 4) “[i]f a new species is listed or critical habitat designated that may be affected by the identified action.” *See* 50 C.F.R. § 402.16. Since the Service reinitiated consultation with Reclamation on February 22, 2013, nearly all of these triggers to reconsultation have occurred. First, as of July 1, 2013, Reclamation exceeded the limit of 55 minnows (observed mortality) specified in the 2013 ITS. Second, Reclamation modified an essential element of the RPA (Element F) to the 2003 Biological Opinion in a way that was not previously considered by the Service. Finally, in January of 2013 (just before consultation was reinitiated), the Service also revised its critical habitat designation for the Southwestern willow flycatcher.

Reclamation’s failure to reinitiate consultation pursuant to at least three separate instances related to its implementation of the 2003 Biological Opinion violates 50 C.F.R. § 402.16. Despite the unique circumstances under which Reclamation claims the 2003 Biological Opinion was extended, its obligation remains to reinitiate consultation upon the triggers set forth in the implementing regulations of the ESA. *See* 50 C.F.R. §402.16(a)-(d). Further, it is

important to note that “[w]hen reinitiation of consultation is required, the original biological opinion loses its validity, as does its accompanying incidental take statement, which then no longer shields the action agency from penalties for takings.” *See Center for Biological Diversity v. U.S. Bureau of Land Management*, 698 F.3d 1101, 1037 (9th Cir. 2012).

IV. Violations of the ESA

Guardians hereby puts Reclamation on notice that it will promptly seek judicial relief if Reclamation fails to remedy the ongoing and imminent future¹⁷ violations of the ESA and its implementing regulations. 16 U.S.C. §§ 1536(a)(2), (d) and 1538(g).

A. Violations of Section 7(a)(2) of the ESA

Guardians hereby puts Reclamation on notice that the agency is violating section 7(a)(2) of the ESA, 16 U.S.C. § 1536(a)(2), and its implementing regulations, 50 C.F.R. § 402 *et seq.*, by: 1) failing to insure that Reclamation’s ongoing and future actions in the middle Rio Grande are not likely to jeopardize the continued existence of the silvery minnow, willow flycatcher or other listed or proposed species; and 2) failing to insure that Reclamation’s ongoing and future actions in the middle Rio Grande are not likely to result in the destruction or adverse modification of the designated critical habitat of the silvery minnow and/or willow flycatcher. 16 U.S.C. § 1536(a)(2).

B. Violations of Section 7(d) of the ESA

Guardians hereby provides notice that Reclamation has violated and continues to violate section 7(d) of the ESA, 16 U.S.C. § 1536(d), by making irreversible or irretrievable commitment(s) of resources which have the effect of foreclosing the formulation of implementation of any reasonable and prudent alternatives which would avoid violating ESA subsection 7(a)(2), 16 U.S.C. § 1536(a)(2).

C. Violations of Section 9 of the ESA

Guardians hereby provides notice that Reclamation is violating section 9 of the ESA, 16 U.S.C. § 1538(g), and its implementing regulations by causing ongoing and imminent future “take” without a permit authorized by law of the endangered Rio Grande silvery minnow and/or Southwestern willow flycatcher as the result of Reclamation’s water management and river maintenance activities in the middle Rio Grande.

¹⁷ *See Colorado Environmental Coalition v. Office of Legacy Management*, 819 F.Supp.2d 1193, 1220 (D. Colo. 2011) (finding Plaintiff’s pre-suit notice under the ESA was effective as to future agency actions, where the letter contained sufficient description of the challenged activities, some of which occurred after the notice letter was sent).

Guardians hereby provides notice that Reclamation is violating section 9 of the ESA, 16 U.S.C. § 1538(g), and its implementing regulations by causing ongoing and imminent future “take” without a permit authorized by law of the endangered Rio Grande silvery minnow and/or Southwestern willow flycatcher by destroying or adversely modifying critical habitat of the listed species as defined in 50 C.F.R. § 402.02.

D. Violations of ESA’s Implementing Regulations

Guardians hereby puts Reclamation on notice that the agency is violating 50 C.F.R. § 402.14(i)(4) and 402.16 by failing to immediately reinitiate consultation upon exceeding the level of take specified in the 2013 ITS.

Guardians hereby puts Reclamation on notice that the agency is violating 50 C.F.R. § 402.16 by 1) failing to reinitiate consultation with the Service for modifying an essential element of the RPA (Element F) to the 2003 Biological Opinion in a way that was not previously considered by the Service; and 2) failing to reinitiate consultation or to incorporate in their ongoing consultation with the Service an analysis of the revised critical habitat designation for the Southwestern willow flycatcher.

V. Noticing Party

WildEarth Guardians is a non-profit, public interest, environmental advocacy, and conservation organization. Guardians’ mission is to protect and restore wildlife, wild rivers, and wild places in the American West. Guardians has over 43,000 members and activists, many of whom live, work, and recreate in areas affected by the ESA violations described herein. Guardians and its members have a substantial interest in the conservation and recovery of the Rio Grande silvery minnow, Southwestern willow flycatcher, and other listed species in the middle Rio Grande and are adversely affected by the State of Colorado’s failure to protect the listed species and their habitat in compliance with the ESA.

The name, address and telephone number of the party giving this notice is as follows:

WildEarth Guardians
516 Alto Street
Santa Fe, New Mexico 87501
(303) 884-2702
jpelz@wildearthguardians.org

VI. Conclusion

One of the purposes of the Endangered Species Act’s citizen suit provision, 16 U.S.C. § 1540(g), is to encourage discussions among parties in order to avoid potential litigation. We encourage Reclamation to seriously consider the concerns detailed in this notice and ask that you discuss the steps the agency may taken going forward to remedy these legal violations. However,

Commissioner, Michael L. Conner, *et. al.*
February 4, 2014

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if the aforementioned violations of the ESA are not remedied within 60 days of the date of this letter, we intend to file a citizen's suit in federal court seeking preliminary and permanent injunctive relief, declaratory relief, and attorneys' fees and costs concerning these violations.

If you believe any of the above information is incorrect, have any additional information that might help avoid litigation, or wish to discuss this matter further, please feel free to contact me at the phone or email address listed below.

Sincerely,

Jen Pelz
Wild Rivers Program Director
jpelz@wildearthguardians.org
303-884-2702

Table 1.
Rio Grande at Albuquerque, NM
Station No. 08330000

Daily Mean Discharge, cubic feet per second

DATE	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
	2013	2013	2013	2013	2013	2013	2013	2013
1	335 ^P	435 ^P	617 ^P	612 ^P	620 ^P	310 ^P	86 ^P	507 ^P
2	294 ^P	428 ^P	617 ^P	617 ^P	579 ^P	306 ^P	146 ^P	497 ^P
3	327 ^P	400 ^P	604 ^P	651 ^P	484 ^P	371 ^P	115 ^P	476 ^P
4	286 ^P	407 ^P	691 ^P	669 ^P	218 ^P	239 ^P	158 ^P	454 ^P
5	274 ^P	447 ^P	697 ^P	705 ^P	300 ^P	492 ^P	106 ^P	444 ^P
6	286 ^P	436 ^P	682 ^P	696 ^P	504 ^P	326 ^P	88 ^P	446 ^P
7	262 ^P	514 ^P	669 ^P	652 ^P	388 ^P	312 ^P	66 ^P	433 ^P
8	297 ^P	514 ^P	662 ^P	529 ^P	363 ^P	451 ^P	53 ^P	424 ^P
9	301 ^P	537 ^P	663 ^P	564 ^P	229 ^P	397 ^P	53 ^P	431 ^P
10	344 ^P	561 ^P	651 ^P	527 ^P	240 ^P	403 ^P	123 ^P	483 ^P
11	326 ^P	560 ^P	624 ^P	494 ^P	209 ^P	479 ^P	856 ^P	463 ^P
12	351 ^P	589 ^P	631 ^P	478 ^P	160 ^P	458 ^P	593 ^P	480 ^P
13	354 ^P	549 ^P	620 ^P	477 ^P	326 ^P	418 ^P	2,260 ^P	491 ^P
14	353 ^P	543 ^P	589 ^P	524 ^P	145 ^P	313 ^P	2,250 ^P	459 ^P
15	358 ^P	542 ^P	565 ^P	554 ^P	189 ^P	258 ^P	2,590 ^P	464 ^P
16	361 ^P	504 ^P	573 ^P	538 ^P	126 ^P	205 ^P	1,810 ^P	1,730 ^P
17	401 ^P	486 ^P	561 ^P	532 ^P	89 ^P	184 ^P	1,180 ^P	1,870 ^P
18	401 ^P	472 ^P	543 ^P	499 ^P	89 ^P	180 ^P	688 ^P	1,870 ^P
19	404 ^P	481 ^P	550 ^P	477 ^P	201 ^P	170 ^P	933 ^P	1,850 ^P
20	399 ^P	469 ^P	555 ^P	438 ^P	535 ^P	155 ^P	836 ^P	1,850 ^P
21	421 ^P	461 ^P	554 ^P	408 ^P	358 ^P	227 ^P	741 ^P	1,920 ^P
22	446 ^P	464 ^P	583 ^P	457 ^P	269 ^P	135 ^{e P}	819 ^P	2,190 ^P
23	448 ^P	456 ^P	608 ^P	491 ^P	139 ^P	78 ^{e P}	1,260 ^P	1,250 ^P
24	472 ^P	465 ^P	589 ^P	507 ^P	111 ^P	75 ^P	856 ^P	835 ^P
25	449 ^P	499 ^P	590 ^P	519 ^P	143 ^P	89 ^P	716 ^P	532 ^P
26	391 ^P	500 ^P	580 ^P	568 ^P	773 ^P	118 ^P	875 ^P	456 ^P
27	361 ^P	537 ^P	577 ^P	592 ^P	2,270 ^P	128 ^P	719 ^P	429 ^P
28	362 ^P	565 ^P	580 ^P	564 ^P	758 ^P	118 ^P	594 ^P	382 ^P
29	377 ^P	628 ^P	620 ^P	568 ^P	519 ^P	107 ^P	533 ^P	363 ^P
30	423 ^P	603 ^P	545 ^P	565 ^P	470 ^P	102 ^P	527 ^P	385 ^P
31	442 ^P		606 ^P		404 ^P	88 ^P		446 ^P
COUNT	31	30	31	30	31	31	30	31
MAX	472	628	697	705	2,270	492	2,590	2,190
MIN	262	400	543	408	89	75	53	363