



July 14, 2014

***Via Electronic Mail***

Michael L. Connor  
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**RE: Solutions to Address Growing Challenges in the Rio Grande Basin**

Dear Deputy Secretary Connor:

I am writing to follow up to our meeting on June 24, 2014 in which we discussed our concerns regarding water management in the Rio Grande Basin and a number of solutions we feel vital to any management strategy going forward. As we discussed, we believe that one of the main problems in the Rio Grande Basin, particularly in the Middle Rio Grande, is the lack of clear consistent federal leadership to hold both state and federal agencies accountable for their management decisions in the Basin and to implement new solutions for the benefit of the Rio Grande. We strongly believe that the U.S. Department of the Interior (“Interior”) must play a key role in charting a new course for the Rio Grande.

As you know, WildEarth Guardians (“Guardians”) has provided several notices of intent to sue to both the U.S. Fish and Wildlife Service (“Service”) and the U.S. Bureau of Reclamation (“Reclamation”) pursuant to the Endangered Species Act (“ESA”) and we stand ready and willing to play a leadership role in advocating for the health of the Rio Grande. At the moment we believe that litigation may be the best means available to create the legal and political will for crafting new solutions in the Basin. That being said, we also believe that common ground does exist between Guardians and Interior and we are requesting additional leadership, partnership and support from your office in developing and implementing lasting solutions to sustain the Rio Grande for future generations.

We believe our interests align with Interior’s and ask for your support in the future in advocating for policy reform at the State level to benefit Interior’s multiple interests in the Middle Rio Grande Project, the San Juan-Chama Project and the maintenance of flows in the Rio Grande. Further, we believe Interior also has an interest in advocating for such reforms as a part of fulfilling its trust obligation to the six Middle Rio Grande Pueblos.

**I. Role of Federal Leadership in Crafting Solutions for the Rio Grande**

We believe there are a number of opportunities for the Department of the Interior—through Reclamation, the Service, the Bureau of Land Management (“BLM”) and the Bureau of Indian Affairs (“BIA”)—to play a much more significant role in facilitating such basin-wide management of the Rio Grande. Interior’s involvement in managing federal resources along the 1900 miles of the Rio Grande includes: 1) Reclamation’s oversight of diversions, uses and transfers of water from the Middle Rio Grande Project; 2) the Service’s duties to protect and recover endangered species and their designated

critical habitats and to manage National Wildlife Refuges (e.g. Bosque del Apache National Wildlife Refuge) to provide important habitat for migratory and overwintering birds and wildlife; 3) the BLM's duty to protect and enhance outstandingly remarkable values of the Rio Grande Wild and Scenic River and; 4) Interior's and the BIA's trust responsibilities to the Pueblos.

A. Reclamation Engagement and Oversight Necessary to Protect its Interests in the Middle Rio Grande

1. *Establish and Fund a Water Acquisition Program in the Basin in an Effort to Secure Environmental Flows*

As mentioned in your confirmation hearing, we appreciate your recognition of the importance of establishing and implementing a water acquisition program in the Middle Rio Grande. We have long advocated for this reallocation of water from agricultural to environmental purposes as a solution for easing tensions and protecting the environmental and cultural values of the Rio Grande Basin. Based on the success of other similar programs in the western United States to secure environmental flows, we believe that this program could also garner such success.

It appears that legislative support for this effort—from recent drought legislation proposed by Senator Udall (D-NM) and the report language included in the 2014 omnibus appropriations bill—is building toward the creation of such a program. This effort, however, can be further supported by Interior by the inclusion of such a program as a required and critical component of the new biological opinion.<sup>1</sup> We believe that if a target amount of water (e.g. 50,000 acre-feet acquired through lease, purchase, donation, etc.) were required as part of any reasonable and prudent alternative (or as Term and Condition of the Incidental Take Statement), this would provide an ongoing and enforceable incentive for the District and others to work with Reclamation to actually implement a water-leasing program going forward.

We also ask that this effort not be limited to acquisition in the Middle Rio Grande. While we believe there are water rights that would be available for purchase or lease in the Middle Rio Grande, such limitation of the program would foreclose other opportunities in Colorado and elsewhere that might prove important to securing sufficient flows for the river. We are currently in discussions with several farmers in southern Colorado that would be interested in participating in this program.<sup>2</sup> If these water rights could be included in this program as well, the benefits would go far beyond the 174-mile reach of the Middle Rio Grande to include critical habitat of the Southwestern willow flycatcher in Colorado and the Rio Grande Wild and Scenic River.

2. *Exercise Discretionary Authority Over the District's Diversion Structures*

Reclamation has the ability—as the operator of the Middle Rio Grande Project (“Project”) and as a party to the 1951 Repayment Contract—to play an important oversight and management role in the Middle Rio Grande. As you know, in 2000 the Solicitor's Office reviewed “the extent of Reclamation's

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<sup>1</sup> Such a requirement may also help secure continued appropriations necessary to support payment to farmers for lease or purchase of their water rights to be used as a part of the program. While such payments are not legally necessary to secure water for supplemental flows, acquisition in this manner from willing sellers has obvious political benefits that will ultimately redound to the health of the Middle Rio Grande.

<sup>2</sup> We have also met with the New Mexico Interstate Stream Commission to discuss how to protect any water acquired from Colorado as an instream flow in New Mexico.

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property interest in irrigation facilities constructed by the [District] in New Mexico in the 1930s.” After careful analysis, the Solicitor concluded:

Reclamation obtained title to [District] facilities through federal legislation authorizing the Project and subsequent agreements between Reclamation and the District. This means, among other things, that the ongoing ESA consultation between FWS and Reclamation concerning Rio Grande river management should be broadened to take into account this ownership interest.”

See Memorandum from Solicitor John Leshy dated June 19, 2000. The U.S. District Court for the District of New Mexico and the U.S. Tenth Circuit Court of Appeals also confirmed this analysis in *Rio Grande Silvery Minnow v. Keyes*, 469 F. Supp.2d 973 (D. N.M. 2002); 333 F.3d 1109 (10<sup>th</sup> Cir. 2003).<sup>3</sup>

Despite this apparent resolution of the discretion issue, it appears today that Reclamation is now defending a position it adopted under the George W. Bush Administration for reasons that make little sense to us.<sup>4</sup> The absence of clarity surrounding this issue only perpetuates uncertainties surrounding management of the Basin, and sends mixed signals to the various affected stakeholders. Reclamation cannot possibly meet its obligations under the Endangered Species Act if the District continues to thwart those efforts at every opportunity.

For example, this spring Reclamation attempted to create a spring peak flow while the District continued to divert the maximum amount of water it could from the base flows in the river. If the District had cooperated—or if Reclamation had asserted its discretionary authority to limit diversions by the District—the peak flow in the lower reaches of the Middle Rio Grande could have been more substantial, thereby creating larger benefits to the river ecosystem. These examples are not the exception, but rather the rule in operations in the Middle Rio Grande. While we understand that Reclamation must expend political capital in order to return balanced management back to the Middle Rio Grande, the alternative has proven ineffective at changing the course for the river over the past fifteen years. Certain and predictable management which conforms with the analysis performed by Solicitor Leshy’s staff is a critical and indispensable element of future river operation.

3. *Stop Insulating the Non-federal Stakeholders in the Middle Rio Grande from Liability Under the ESA*

In addition to Reclamation’s failure to exercise its discretionary authority with regard to the diversion structures within the District, we believe Reclamation should use its position as the lead agency in the consultation with the Service (Consultation #02ENNM00-2013-F-0033) to ensure that “take” coverage under section 9 of the ESA will only be extended to the non-federal parties upon full cooperation and efforts toward preventing jeopardy to the listed species and participating in making progress towards recovery. The District and the State of New Mexico have been shielded from any liability under the ESA for nearly two decades and still appear to be the most powerful stakeholders at the

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<sup>3</sup> Although these decisions were vacated by the Tenth Circuit in *Rio Grande Silvery Minnow v. Keyes*, 601 F.3d 1096 (10<sup>th</sup> Cir. 2010), that vacatur did not alter in any way the nature and extent of Reclamation’s discretionary authority with respect to operations of dams and diversions structures in the Middle Rio Grande.

<sup>4</sup> Reclamation stated in its biological assessment dated January 2013 that “it does not have the discretion to operate the MRG Project diversion structures for several reasons, including that Reclamation does not and has never held any interest in the right to divert water for lands within the [District].” This position is directly contrary to Solicitor Leshy’s determination in 2000 and that of the Courts.

table with the greatest impact on the listed species. The only way this dynamic can shift is if Reclamation and the other Interior agencies are willing to remove the District and the State from the consultation upon failure of these stakeholders to cooperate in a new water management paradigm that moves from crisis orientation to full recovery. Along these same lines, the Incidental Take Statement in the upcoming biological opinion should make it exceedingly clear that neither the District or the State will be exempt from the ESA's take prohibition unless they fully comply with the Terms and Conditions set out therein.

4. *Play an Active Role to Ensure the State of New Mexico Does Not Permit Additional Depletions to the System*

Reclamation has exercised authority in the Middle Rio Grande with regard to water transfers in the past and should do so again immediately. From 2006 to 2008, Reclamation filed protests with the New Mexico State Engineer regarding at least a half dozen water transfer applications. Most of the transfers challenged involved the transfer of irrigation water to municipal uses and where a significant distance exists between the transfer to and transfer from locations. Reclamation correctly cites in its protests the concern that the transfers may negatively impact the flows in the Rio Grande including flows necessary to maintain habitat for endangered species as well as impacting Reclamation's interest in the Middle Rio Grande Project and the San Juan-Chama Project water operations. The protests provide:

The diversion point of the water irrigating the "move from" acres is San Acacia Diversion Dam, which is a Middle Rio Grande Project facility. Diversions of water at this facility are for project purposes, and a change in those diversions would affect other project water deliveries. Water Rights No. 1690 for Middle Rio Grande Project purposes may be adversely impacted if this application is improperly approved.

See Protests to Water Transfer Applications dated July 25 and 30, 2006, November 23, 2007, May 12, 2008, June 4 and 27, 2008, and July 22, 2008. The protests also cite the concern that:

If the "move-from" lands have not been historically irrigated or if these lands are allowed to revert to riparian phreatophytic vegetation after the proposed transfer, this action would in effect transfer paper water upstream and create an additional depletion on the system. A requirement of the permit should be to keep the lands free of such vegetation as salt cedar and Russian olive.

*Id.* Reclamation's concerns were detailed further in a White Paper by Reclamation employee Chris Gorbach, P.E., which is attach hereto as **Exhibit A**. As water transfers create additional depletions to the system, Reclamation's obligation to acquire more supplemental water to maintain flows in the river also increases. Thus, it is in Reclamation's interest to ensure that the State's water transfer policies are reformed.

Guardians shares Reclamation's past concerns regarding the State's water transfer policies. As you may know, we also have protested water transfers in the Middle Rio Grande in the past and intend to continue to do so in the future. We believe that net depletions in the system will continue to increase until the State begins to require and to enforce: 1) dry-up covenants for lands where water rights are being transferred off the land, 2) dedication of carriage water to the river from the new (upstream) point of diversion to the historic (downstream) point of diversion to mitigate any impacts to the river, 3) provisions in water transfers limiting diversion of transferred rights to that proportion of water actually available in any given year (e.g. shared shortages), and 4) the amount of water transferred from the District to be removed from the calculation for storage in El Vado reservoir.

We believe our interests align with Reclamation's and ask for your support in the future in advocating for policy reform at the State level to benefit Reclamation's interest in the Middle Rio Grande Project, San Juan-Chama Project and the maintenance of flows in the Rio Grande. Further, Reclamation also has an interest in advocating for conditions being placed on water transfers as a part of fulfilling its trust obligation to the six Middle Rio Grande Pueblos.

5. *Reclamation's Should Shut Down the District's Water Bank*

The District's Water Bank should be of particular concern of Reclamation. Similar to the policies of the State with regard to water transfers, operation of the District's Water Bank provides great opportunity for increasing depletions in the system with little oversight by the State. Reclamation and the State have both expressed serious concern over the source of the water provided through the Water Bank—particularly the fact that the District has never provided proof of beneficial use to the State. Thus, no due diligence occurred, prior to operation, of the nature of the water rights the District claimed to have “perfected”. We believe that it is in the interest of Reclamation—as a part of the current consultation—to require such proof of beneficial use prior to the continued operation of the Water Bank.

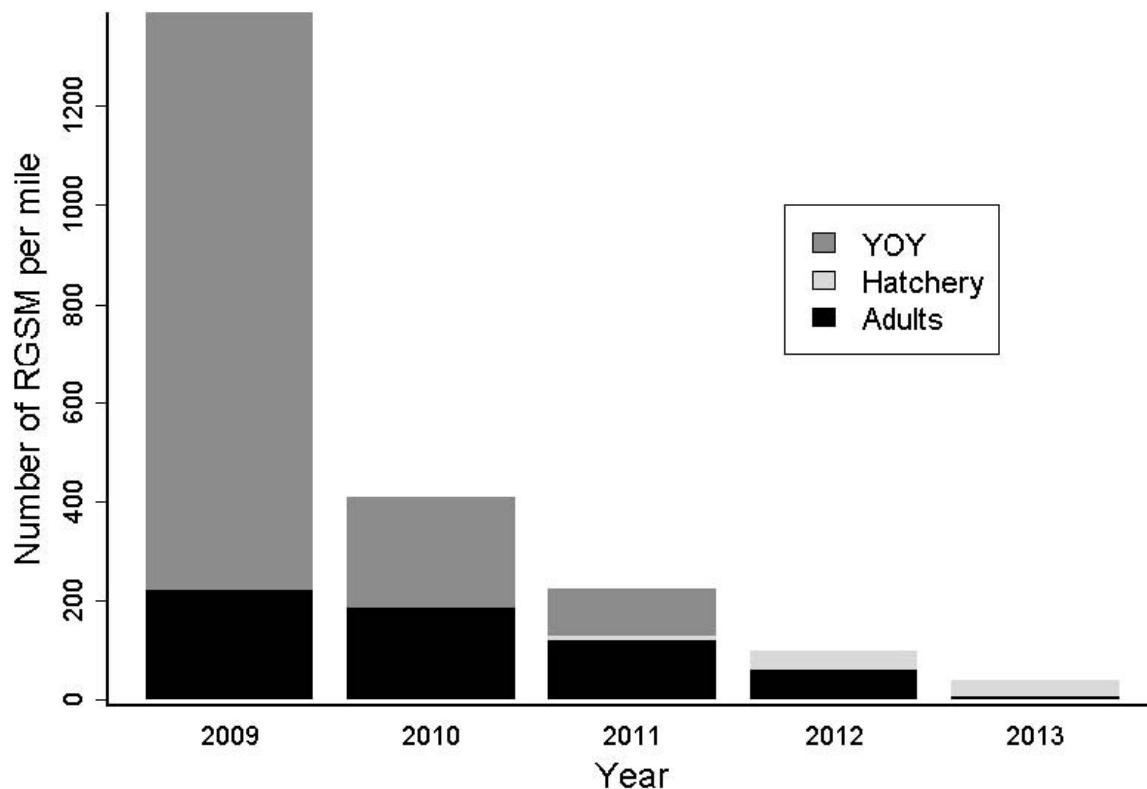
When the Water Bank is operating, the District's diversions are increased to include these additional users. Thus, less native water can be stored in the upstream reservoirs 1) to ensure the Pueblos receive their allocation of prior and paramount water, 2) to satisfy New Mexico's Compact delivery obligation to Texas, and 3) to ensure Reclamation has adequate supplemental water (through storage of relinquishment credits) to protect flows for endangered species. Further, late in the summer when rainstorms could help reconnect the drying river and provide significant habitat to stressed species, operation of the Water Bank increases demands on the system and prevents that from occurring. As a result, Reclamation must continue to release supplemental water despite the additional water in the system.

B. Service's Duty to Protect Fish and Wildlife in the Middle Rio Grande

Much of the last two decades of management of the Rio Grande in New Mexico has been focused on protecting endangered species while maintaining agricultural and municipal uses within the Middle Rio Grande. As you know, the 2003 biological opinion was the resulting compromise that allowed two-thirds of the Rio Grande—between Isleta diversion dam and Elephant Butte Reservoir—to dry from June 15 to October 31 in hopes that endangered fish and wildlife could survive and recover in different areas of the designated critical habitat by creating habitat in reaches more easily kept wet. In addition to the conceptual failure of the 2003 biological opinion, many of the provisions of the plan were not implemented (e.g. establishment of fish passage at the San Acacia and Isleta diversion dams). As a result, endangered species populations continue to decline and are at lower levels than when listed under the ESA. The following graph<sup>5</sup> shows the population decline of the Rio Grande silvery minnow over the past five years:

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<sup>5</sup> See Rio Grande Silvery Minnow Salvage and Rescue: 2013 Annual Report at page 8 (Figure 2-Average number of adult, young of year (YOY), and hatchery-reared Rio Grande Silvery Minnow (RGSM) encountered per mile, per year, in the Middle Rio Grande during salvage operations).



As demonstrated above, the plan put in place in the Middle Rio Grande during the past decade failed to prevent “jeopardy” to the species. Thus, the plan for the next decade must include stronger protections for the listed species and the stakeholders must change the status quo of dewatering the Rio Grande at the expense of the environment.

1. *Issue a New Biological Opinion with Primary Objective of Protecting the Listed Species*

The Service must finalize and implement a new management regime for the Middle Rio Grande in the form of a new biological opinion. The 2003 biological opinion expired on February 28, 2013 and no longer represents the best available science in protecting or recovering listed species. Last year, the Service introduced the “Hydrologic Objective” emphasizing the importance of a spring peak flow as well as maintenance of flows at the San Acacia diversion dam in providing conditions necessary for survival and recovery of endangered species. The Service stated that the Hydrologic Objective is based on the best available science. The continued management of the species based on a plan that has not worked for the past decade would be patently irrational. Therefore, we believe it is essential for the new management regime to begin immediately using the principals set forth in the Hydrologic Objective in a way that creates mandatory obligations on the state and federal agencies to ensure that there is adequate habitat available to maintain conditions sufficient for reproduction and survival of the species. Further, we believe that the Service could implement many of the solutions proposed in this letter by mandating them as a part of a new biological opinion.

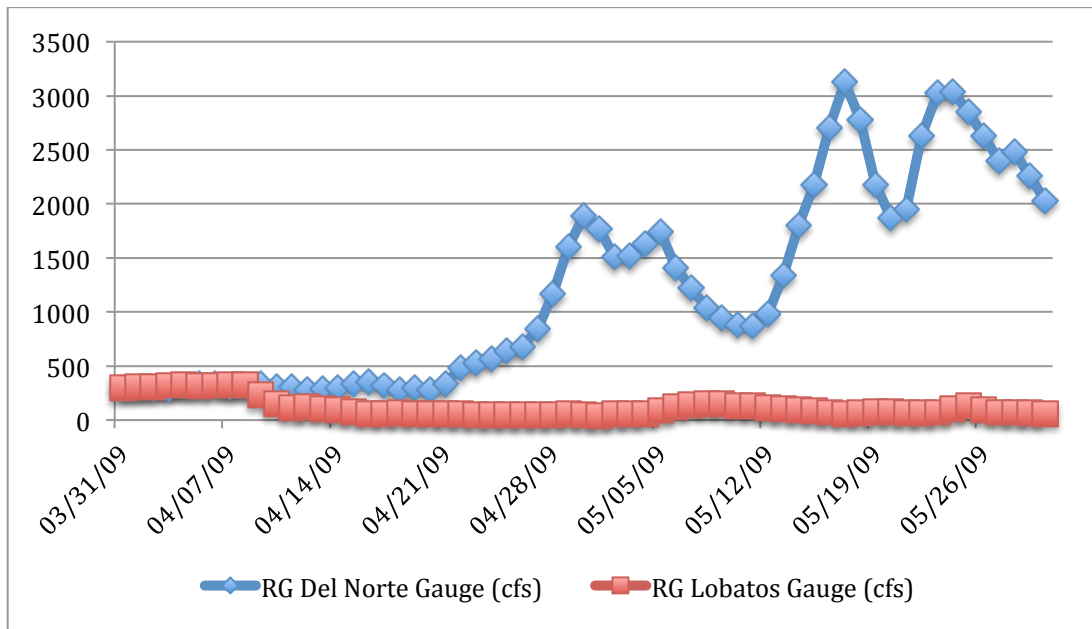
2. *Engage the State of Colorado as Part of Any Solution for the Middle Rio Grande*

For the last 20 years, stakeholders in the Middle Rio Grande have worked to retime flows from the upper basin reservoirs in New Mexico in an attempt to ensure a spring peak flow is generated to benefit the river ecosystem as well as a handful of endangered species. These efforts have largely proven unsuccessful (especially in drier years when the river needs the water the most) due to the inability of the stakeholders to include Colorado as a part of the solution.

Sixty-five percent of native flows in the Rio Grande originate in the San Juan Mountains of southern Colorado. This water is managed solely for the benefit of water users in the state of Colorado, with the exception of the allocation to New Mexico and Texas under the Rio Grande Compact. In years of low spring runoff when it is most important to maintain flows—both to support important habitat for fish and wildlife and the recreational economy of New Mexico—Colorado takes nearly all the flow of the river pursuant to the terms of the Compact. We believe this will become the norm in our climate-changed system.

Guardians conducted an analysis comparing the spring flows at the Del Norte Gauge (where the Rio Grande enter the San Luis Valley) and at the Lobatos Gauge (where the Rio Grande crosses the Colorado-New Mexico state line) during the months of April and May from 2009 to 2014. The table and graphs showing the comparison are attached as **Exhibit B**. This analysis shows that during dry years when the peak flow from the San Juan Mountains is less than 4500 cubic feet per second, almost no water is delivered to the New Mexico state line. For example, on the date of the peak flow in 2013 (May 18, 2013), Colorado consumed 98% of the water leaving only 2% at the state line.

**Comparison of Rio Grande Flows at Del Norte and Lobatos Gauges  
From April-May 2013**



The graph clearly shows that even in dry years there are still dynamic flows in Colorado resulting from snowmelt in the San Juan Mountains that could be deployed, in part, to induce a spawning spike for the

silvery minnow in the Middle Rio Grande. However, only a trickle of that water reaches the Colorado-New Mexico state line. The amount of water consumed in the San Luis Valley is a huge burden on the river and a solution in the Middle Rio Grande cannot be found without looking north to the headwaters state that consumes more than half of the water that otherwise would be destined to pass through New Mexico and Texas on the way to the Gulf of Mexico.

Basin-wide management schemes, like recovery implementation programs (“RIP”), have been formed to create a multi-state solution in other river basins (e.g. South Platte River).<sup>6</sup> However, when the Middle Rio Grande Endangered Species Collaborative Program (“Collaborative”) began moving toward formation of a RIP, the scope of the RIP began and ended in the Middle Rio Grande. Similarly, the current Endangered Species Act section 7 consultation between Reclamation and the Service fails to consider the additional source of water from Colorado that is currently absent from consideration to resolve endangered species issues in the Middle Rio Grande. It does not appear there has been any attempt by Interior or the other stakeholders in the Middle Rio Grande to craft a solution that includes Colorado or the Rio Grande Compact Commission to ease the impacts of the current delivery schedule under the Rio Grande Compact.

Based on Interior’s management responsibilities and duties, we believe that it is in Interior’s interest to play a more influential role in moving beyond the status quo. All of the Interior Department’s agencies with a stake in Rio Grande water management have an interest in seeing more water cross the Colorado-New Mexico state line to support flows in the river. For example enhanced instream flows from Colorado could benefit the congressionally designated Rio Grande Wild and Scenic River, one of the first river segments designated under the Wild and Scenic Rivers Act (now flowing through the recently designated Rio Grande del Norte National Monument), the creation and maintenance of critical habitat for endangered species, and the protection and restoration of wetlands and important migratory bird habitat at the Bosque del Apache National Wildlife Refuge near Socorro, just to name a few. We understand that there are legal, practical and political obstacles that come along with breaking new ground, but until we begin to remove those obstructions the root of the problem will never be resolved.

3. *Assert the Senior Water Rights of the Bosque del Apache National Wildlife Refuge to Ensure Flows in Lower Reaches of the Rio Grande*

The Bosque del Apache National Wildlife Refuge (“Refuge”) maintains a unique position both geographically and legally in managing water in the Middle Rio Grande. The Refuge is located at the bottom end of the Middle Rio Grande and owns senior water rights in the Basin. These two assets provide the Service and Interior with a very powerful tool in the basin to provide flows in the Middle Rio Grande downstream of Isleta diversion dam and potentially downstream of San Acacia diversion dam—the portion of the river where endangered species have historically thrived and one of the more difficult sections of the river to maintain flows. We believe the Interior and the Service should explore use of these assets to protect flows in the Refuge and the lower reaches of the Middle Rio Grande.

The Refuge’s senior water rights are often cited by the District as the cause of drying in the section of the Rio Grande that runs through the Refuge. While the Refuge does divert water from the river impacting flows in the region, it is entirely nonsensical to hold the Refuge accountable for the entire burden of the drying through the Refuge. A large part of that drying occurs as the result of the District’s

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<sup>6</sup> In that case, the Service’s issuance of jeopardy biological opinions for small water projects in Colorado made it clear that Colorado had to be part of the solution.



diversions at the San Acacia diversion dam,<sup>7</sup> which allow only minimum flows to bypass the dam. If the District bypassed more water at the San Acacia diversion dam, greater flows and more habitat would be provided in the river from the dam south and would likely ease the drying in the Refuge reach of the Middle Rio Grande. This is another area where Guardians would be happy to partner with Interior and the Refuge to explore maximizing these assets to create more environmentally sound management in the Middle Rio Grande.

C. BLM's Obligation to Determine Flows Necessary in Rio Grande to Protect and Enhance Outstandingly Remarkable Values in the Rio Grande Wild and Scenic River

In 1968, Congress designated 53 miles of the Rio Grande—from the Colorado-New Mexico state line to the Taos Junction Bridge—as one of the first rivers to be protected under the Wild and Scenic Rivers Act (“WSRA”). *See* 16 U.S.C. § 1271 *et seq.* In 1994, Congress designated an additional 12 miles of the Rio Grande downstream from the Taos Junction Bridge to just north of Velarde, NM. Importantly, these segments fall within the Rio Grande del Norte National Monument designated by President Obama in 2013.

Pursuant to section 10 of the WSRA, 16 U.S.C. 1281(a), the BLM has an obligation to identify the “outstandingly remarkable values” of the river segment as well as manage the segment to “protect and enhance” those resource values. However, due to the perceived limitation presented by the Rio Grande Compact,<sup>8</sup> the BLM did not designate outstandingly remarkable values for the original segment until 30 years after the river was designated.

In 2000, as a part of the Rio Grande Corridor Management Plan, the following values were designated pursuant to the Act:

TABLE B-1 COMPARISON OF RELATIVE RESOURCE VALUES OF RIVER SEGMENTS WITHIN THE PLANNING AREA								
River Segment	Scenic	Geo- logic	Recre- ational	Fish Habitat	Wild- life	Cul- tural	Water Quality	Riparian
Rio Grande Upper Box (1968 designation)	1	1	2	1	3	2	3	4
Rio Grande Taos Box (1968 designation)	1	1	1	1	3	1	3	4
Rio Grande 12-mile Segment (1994 designation)	2	2	1	1	2	1	3	1

<sup>7</sup> The District’s diversions are generally junior to the water rights owned by the refuge and thus—if priority administration were possible in the Middle Rio Grande—the District’s rights should be curtailed prior to the Refuge’s water rights in case of shortages.

<sup>8</sup> Section 13(e) of the WSRA provides that “[n]othing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by any States which contain any portion of the national wild, scenic or recreational river area.” *See*, 16 U.S.C. § 1284(e).

See Appendix 3, Rio Grande Corridor Planning Area: Wild and Scenic River Study at A3-3. The numbers indicate the ranking of the values from 1 to 4 with 1 being “exemplary, one of the better examples of that type of resources at a national level”; 2 being “unique, a resource or combination of resources that is one of a kind at a regional level”; or 3 being “high quality, at a regional and/or local level.” *Id.*

However, even after BLM designated these values it has failed to conduct any evaluations regarding the flows necessary in the river to protect and enhance, at a minimum, the designated scenic, recreational and fish habitat values. Such analysis today may be quite different than an analysis that would have been conducted 46 years ago in 1968.

We believe that Interior could play a role in obtaining funding and support for reviewing the minimum flow requirements necessary to support the unique and valuable resources of the Rio Grande Wild and Scenic River. See **Exhibit C**. Guardians supports such a study and believes that it is necessary to prove the importance of flows across the Colorado-New Mexico state line not only for important recreation and economic values in northern New Mexico, but also for endangered species protection.

Further, as discussed above Guardians is currently pursuing the acquisition of water through leases in southern Colorado that would be used to secure instream flow rights in both Colorado and New Mexico. An instream flow study for the Rio Grande Wild and Scenic River segment could help Guardians demonstrate the important role of flows in the Rio Grande in northern New Mexico as a way to bolster the Monument’s and Wild and Scenic River’s values.

D. Interior and the Bureau of Indian Affairs Responsibility to Manage the Rio Grande Recognizing their Trust Obligation to Pueblos

1. *Interior Should be Supportive of Changing Water Transfer Policy and Should Join the Pueblos in Protests to Water Transfers*

We believe Interior also has a legal obligation in changing management of the Rio Grande in order to fulfill its trust obligation to the numerous Pueblos throughout New Mexico. As discussed above, the Pueblos as well as Interior have an interest in ensuring that new depletions are not created in the Basin. The Pueblos are active in monitoring and challenging water transfers in the Middle Rio Grande and could use Interior’s support in securing policy reforms from the State. In order to fulfill its trust obligation to the Pueblos, Interior should make efforts to support the Pueblos in finding a solution to mitigate the depletions associated with water transfers.

2. *Retiming Deliveries from Colorado Could Help Interior meet its federal trust obligation to the Pueblos*

Interior also has an interest in understanding and ensuring deliveries from Colorado under the Rio Grande Compact on behalf of the Pueblos. As shown above, the timing of deliveries from Colorado pursuant to the Compact are such that the natural flow of the river is significantly altered from how it existed historically. This impacts that ability of Reclamation and the BIA to ensure that enough water will be available for storage and later release to satisfy the prior and paramount rights of the six Middle Rio Grande Pueblos.

In a dry year, storage of the Pueblos' prior and paramount rights in the spring is of great importance to ensure the ability to irrigate throughout the season<sup>9</sup>. When Colorado starts diverting in April, the amount of water available for storage decreases significantly. The Pueblos are not subject to the terms of the Compact and therefore could call for water from Colorado if their senior water rights were not being satisfied. It is Interior's responsibility to ensure that water is available for use by the Pueblos and that includes engaging Colorado to deliver in times when necessary to meet the obligations of the Pueblos' prior and paramount rights.

### 3. *Carryover storage of the Pueblos' Prior and Paramount Water*

Interior should also provide the Pueblos with autonomy over their prior and paramount water in a way that incentivizes conservation and discourages continuous but wasteful development of its senior water rights. Currently, the Pueblos can only ensure full use of its prior and paramount water by irrigating the full acreage of their prior and paramount lands as well as the newly re-claimed Pueblo lands within the District. If the Pueblos began to utilize their water rights fully, depletions in the Basin would increase significantly. This would impact the State of New Mexico's ability to meet its obligation under the Compact as well as make it very difficult for Reclamation to provide flows to protect the listed species in the Basin.

Maintaining flexibility for the Pueblos by providing carryover storage will have numerous benefits to the Pueblos as well as provide greater security for the available water supply in the basin. First, carryover storage would provide a water safety net within the Middle Rio Grande basin. If the Pueblos are allowed to carryover water in El Vado into subsequent years, a supply of water will be available to the Pueblos and potentially for others within the basin when faced with a severe drought. The Pueblos could potentially lease and receive compensation for providing its water resource to benefit the listed species in the Basin or to meet delivery requirements under the Compact in those circumstances when there is available stored prior and paramount water in El Vado that is not required for the Pueblos' irrigation demands. This could potentially be an additional source of water to satisfy demands in the Middle Rio Grande. Second, the Pueblos are the only entity that can store water when Article VII of the Compact is in effect. Therefore, providing the Pueblos with carryover storage would allow storage even in years when it would not be available to other water users in the basin. Such carryover storage will be increasingly valuable in the Rio Grande Basin in an era of climate change and with decreasing water availability.

Carryover storage could also be conditioned on dedication of a portion of that storage to environmental purposes. This condition would ensure that water is available not only for additional use in subsequent years, but that the river, the riparian environment and listed species could be served as well.

This carryover water could be stored in the Environmental Pool in Abiquiu Reservoir and would be released to maintain flows in the Rio Grande to benefit the listed species and could also serve to satisfy the State of New Mexico's obligation under the Compact. The Environmental Pool would serve to not only replicate the current nonuse of a portion of the Pueblos' water rights, but hopefully would guarantee greater certainty that the water is available to the species and the Compact and that it is not just made available for further depletion by water users in the Middle Rio Grande.

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<sup>9</sup> Storage is particularly important due to the fact that the State of New Mexico does not administer water rights using the priority system to make water available to senior water right holders. Therefore, the Pueblos prior and paramount storage is an assurance that the senior water right will be fulfilled even without administration.

3. *Distribution of Relinquishment Credits Obtained Due to Over Delivery under the Rio Grande Compact*

Further, under the current management scheme, any prior and paramount water remaining in El Vado at the end of the season reverts to the general pool that is controlled and administered by the District. Generally, that water is released downstream—typically in November or December—to satisfy New Mexico’s obligation to Texas under the Rio Grande Compact. The “relinquishment credits” obtained by the State when the water is released to Texas are not credited to the Pueblos—nor provided to mitigate any environmental harm to endangered species as a result of the over delivery during the prior year—but instead are brokered by New Mexico to other water users for storage under Article VII conditions in subsequent years. The District is the primary beneficiary of these credits.

## **II. Solutions Necessary for the Next Decade**

Over the next decade, we believe it is imperative that we start managing the Middle Rio Grande for long-term sustainability of the fragile river ecosystem. We can no longer compromise the lower two-thirds of the Middle Rio Grande in hopes that man-made habitats will suffice to protect and recover imperiled species and to maintain a functional dynamic riparian environment that supports recreation, tourism, and fish, wildlife and plants. The perpetual band-aides used to date must be replaced with basin-wide solutions that address the actual causes of this crisis, which include the destruction and modification of habitat due to dewatering diversion of water, water impoundment and modification of the river through channelization, among others.

Such solutions require the stakeholders throughout the river basin to share the burden of creating a sustainable system instead of conducting business as usual at the expense of the environment and the quality of life of the region. We believe the following solutions need to be implemented to sustain the Rio Grande ecosystem:

- Establish and implement a water acquisition program in the Rio Grande Basin;
- Determine the flow levels that are necessary in the Rio Grande Wild and Scenic River to protect and enhance the designated outstandingly remarkable values;
- Assert and protect the senior water rights owned by the Service as a part of the Bosque del Apache National Wildlife Refuge to support maintenance of the refuge and to support flows in the Rio Grande;
- Engage the State of Colorado to ensure that flows in the Rio Grande south of the Colorado-New Mexico state line are supported especially under low flow conditions;
- Ensure the implementation of the Hydrologic Objective or other similar guidance that supports conditions in the river where fish and wildlife can thrive;
- Facilitate reauthorizations of the Middle Rio Grande reservoirs to allow retiming of flows to mimic the historic flow conditions; and
- Investigate and plan to remove or modify the dams and reservoirs that segment the Rio Grande with the purpose of reconnecting isolated habitat.

Deputy Secretary, Michael L. Connor  
July 14, 2014

We appreciate you taking time to meet with us in person and hope that this letter provides a roadmap for what we view as the elevated role Interior could play in water management in the Rio Grande Basin. We would be happy to engage in further dialogue if you are interested. Please feel free to contact me with any questions or concerns.

Sincerely,

Jen Pelz  
Wild Rivers Program Director  
[jpelz@wildearthguardians.org](mailto:jpelz@wildearthguardians.org)  
(303) 884-2702

Enclosures  
cc w/encl.:

Anne J. Castle, Assistant Secretary, U.S. Department of the Interior  
Lowell D. Pimley, Acting Commissioner, U.S. Bureau of Reclamation  
Jennifer Gimbel, Deputy Commissioner, Extern and Intergovernmental Affairs  
Dan Ashe, Director, U.S. Fish and Wildlife Service  
Gary Frazer, Assistant Director, U.S. Fish and Wildlife Service

# EXHIBIT A

## **White Paper: Middle Rio Grande Water Transfers**

### **Introduction**

This document identifies and discusses water management and impairment issues inherent in the State of New Mexico's water rights transfer process in the Middle Rio Grande Project area.

In New Mexico, the Office of the State Engineer (OSE) is the State agency responsible for administering water rights, including changing points of diversion and places or purposes of use. The Bureau of Reclamation has held several meetings with OSE officials to discuss the process for administering water right transfers in the Middle Rio Grande basin and how these transfers are affecting Federal interests. These meetings have illuminated defects in the established transfer process that promote a net increase in depletion of water which, in turn, impacts Middle Rio Grande Project water supplies, supplies for Pueblo Indian Prior and Paramount lands, flows for endangered species, storage of water at El Vado Reservoir, and compliance with the Rio Grande Compact.

### **Background**

Demand for municipal and industrial (M&I) water in the Middle Rio Grande basin is increasing. To meet this demand, cities and towns are seeking to acquire agricultural surface water rights and transfer them to municipal supply wells. The OSE considers the basin to be fully appropriated, so transfer of rights is one of the few viable options to increase supplies for cities such as Rio Rancho and Bernalillo.

The number of surface water rights available for transfer is very limited. In the Middle Rio Grande basin, the OSE only allows transfer of "pre-1907" water rights -- those that can demonstrate a history of continuous irrigation dating back to before the establishment of the Territorial Engineer's authority over water rights in 1907. Ownership of these rights is considered to be vested with the land owner. Almost all other irrigation rights in the Middle

Valley are associated with Indian lands or the Middle Rio Grande Conservancy District and cannot be severed and transferred.

A complicating factor is the lack of adjudication of water rights in the Middle Rio Grande basin. There is no comprehensive inventory of pre-1907 water rights or their present ownership, status, or location.

In lieu of adjudicated rights, the OSE uses the "Middle Rio Grande Administrative Area Guidelines for Review of Water Right Applications" (Guidelines) to assess the validity and transfer of pre-1907 water rights. These guidelines were established September 13, 2000, under State Engineer Thomas C. Turney.

### **Issue**

The first paragraph in the introduction section of the Guidelines states that "the surface waters of the Rio Grande have been fully appropriated since the Rio Grande Compact was consummated. Accordingly, the State Engineer does not allow new Rio Grande Surface water appropriations". This is the critical tenet of the OSE's responsibility and intent to manage Middle Rio Grande depletions within the limits set by the Compact. However, as will be shown, the Guidelines are actually allowing *de facto* new appropriations of water in the form of unintended increases in net depletions.

In considering transfer applications, the OSE only allows transfer of the consumptive use (CU) portion of a water right, presently computed to be 2.1 acre-feet per acre. Applicants generally seek to transfer the entire CU. However significant concerns arise over the question of whether this value correctly represents the net effect on the basin's water budget when transfers occur. In most cases transfer of the full consumptive use portion of a water right actually increases overall depletions.



The OSE assumes that consumptive use of water on “move-from” lands will be zero after the transfer of irrigation rights. In most cases, this assumption is not correct. Consumptive uses on move-from lands are likely to continue for a number of reasons including:

- *Continued irrigation.* Move-from lands may continue to receive water from the Middle Rio Grande Conservancy District (MRGCD). The OSE does not have adequate monitoring or enforcement mechanisms in place to ensure that water is not delivered to lands from which pre-1907 rights have been severed. There has been no determination of the MRGCD’s rights. Under permit application 0620, the MRGCD proposed to irrigate more than 123,000 acres, however this right has never been perfected through Proof of Beneficial Use. Actual irrigated acreage in the MRGCD during the early 1990s was shown to be about 55,000 acres by Reclamation’s Land Use Trend Analysis, but varies from year to year. MRGCD provides water to lands within District boundaries without regard to the history of irrigation use or status of water rights.
- *Consumptive use by replacement vegetation.* In many parts of the valley, formerly irrigated lands revert to phreatophytic vegetation such as saltcedar, cottonwood, and Russian olive within a few years if the vegetation is not controlled. CU values for these phreatophyte species are comparable to high water use crops such as alfalfa. So, there is no lasting reduction in depletions on move-from lands if they are allowed to revert to riparian woodlands. It is notable that MRGCD’s original plan in filing for its water rights permit was to provide irrigation partly through salvage of non-beneficial uses of water by phreatophytes.
- *Domestic wells.* In New Mexico, the OSE is required to permit all applications for domestic wells. Many domestic wells have been permitted on retired farm lands once they have gone out of production. Any replacement depletions from new domestic wells on move-from lands will increase net depletions.

In addition to increasing net depletions, transfers may cause impacts in other ways.

- *Transferring uses upstream.* Many transfer applications involve moving uses from lower parts of the basin to urban centers far upstream. Flows between the move-to and move-from locations are diminished because the CU portion of the water right and possibly portions of the “carriage water” necessary to move water through the system will be conveyed only to the upstream diversion point.
- *Transfers from surface water to ground water.* Surface water supplies are far more susceptible to drought caused shortages than groundwater. Groundwater withdrawals may continue when surface water users, who often have a senior priority, are experiencing shortages. Withdrawal of a full CU quantity from groundwater sources under a transferred right may allow use of water that would not have been available to the original surface water user.
- *Transfers to uses outside MRGCD boundaries.* The Middle Rio Grande Project’s water comes partly from water stored at El Vado Reservoir. If the full CU portion of a water right is transferred, part of the transferred right comes from stored Project water. Transfers of full CU quantities may result in Project water being moved to locations outside of the Project area.
- *Segmentation of cumulative impacts.* The OSE views each water right transfer application as a separate action. The Guidelines make no provision to account for the cumulative effects of many such water transfers. Individual transfers involve small amounts of water with impacts on the river that are not measurable because of inherent measurement error, and may not occur for many years. Consequently they are regarded as *de minimus* in their effects. Once the effects become manifest, corrective actions are difficult and expensive. The effect on the Rio Grande from increasing losses to ground water recharge in the Albuquerque Reach is clearly evident. Reclamation’s Middle Rio Grande Water Assessment investigations of 1993-1994 showed river and riverside drain losses between Bernalillo and Isleta Pueblo to groundwater recharge to be about 45 cfs or

32,600 acre-feet per year. Later estimates by the USGS, for the period 1996 to 2000, for a reach of the river between Bernalillo and Rio Bravo, indicate that losses from the surface water system to groundwater recharge had increased to about 87 cfs for the same reach of the river, but 10 miles shorter. These losses will continue to increase over time as the full impact of groundwater mining grows on the river.

## **Consequences**

As depletions increase, more stored water will have to be released from El Vado Reservoir to meet the greater demand. More water will need to be released to assure full deliveries to Pueblo Prior and Paramount lands. This will lead to an increased frequency and magnitude of shortages for all Middle Rio Grande Project water users.

Increased depletions will reduce water deliveries to Elephant Butte Reservoir as required by the Rio Grande Compact (Compact). Compact Articles VI and VII restrict operation of post compact reservoirs, including El Vado, whenever New Mexico accrues a debit under the Compact or when total useable storage for the Rio Grande Project is less than 400,000 acre-feet. Therefore, reduced Compact deliveries will mean that less water can be stored at El Vado for Middle Rio Grande Project water users under these restrictions more often. New Mexico will also have fewer and smaller Compact credits. In recent years, relinquishment of Compact credits has been an important means to make water available for endangered species protection and irrigation shortage relief.

Ultimately, New Mexico may be unable to deliver enough water to comply with the Compact. This would precipitate a situation analogous to what has occurred on the Pecos River. In the case of the Pecos, over-allocation of the basin's groundwater resulted in chronic project supply shortages for Reclamation's Carlsbad Irrigation District, which has senior rights to any of the groundwater rights in the basin. Eventually, Compact shortfalls led to a successful lawsuit by Texas to force New Mexico to comply with the Pecos River Compact. The State found that reliance on making priority calls on the river under the Prior Appropriation Doctrine fails to

bring timely relief under these conditions and declared this failed condition a “futile call”. The State is now expending tens of millions of dollars on measures to ensure continued Compact compliance under a U.S. Supreme Court decree.

Reduced river flow will also mean that more supplemental water will be needed to maintain flow targets in the river for protection of endangered species. Failure to meet these Biological Opinion flow requirements will be more probable, resulting in potential for Federal Court mandated solutions to the violation.

### **Potential Solutions**

The OSE could condition permits or reduce the quantity of water transferred to avoid or mitigate adverse impacts of water transfers. Possible conditions could include:

- Prohibiting future irrigation of move-from lands and instituting effective monitoring and enforcement measures.
- Conditioning permits to ensure vegetation control on move-from lands, with monitoring measures.
- Reducing the permitted transfer quantity when domestic wells are permitted on move-from lands.
- Adjusting the permitted transfer quantity to account for portion of the water supply provided by Project storage.
- Conditioning permits so that shortages are equitably shared among surface water and groundwater users.
- Limiting or promoting the move-from and move-to locations of transfers to take place in the same reach of the river and in as close proximity as possible.
- Requiring some portion of transfers to be dedicated to the State’s Strategic Water Reserve.

# EXHIBIT B



**EXHIBIT B**  
**2009-2014 Comparison of Daily Average Flows in Rio Grande**  
**From April 1 to May 31**

DATE	RG DEL NORTE (cfs)	RG LOBATOS (cfs)	(Del Norte - Lobatos)	% Remaining @ CO-NM State Line	AVG % Remaining/ Annual Peak
04/01/09	434	618	-184	142.40%	58.87%
04/02/09	365	604	-239	165.48%	
04/03/09	344	529	-185	153.78%	
04/04/09	321	463	-142	144.24%	
04/05/09	307	412	-105	134.20%	
04/06/09	288	373	-85	129.51%	
04/07/09	308	340	-32	110.39%	
04/08/09	359	315	44	87.74%	
04/09/09	461	314	147	68.11%	
04/10/09	527	353	174	66.98%	
04/11/09	678	390	288	57.52%	
04/12/09	641	464	177	72.39%	
04/13/09	573	489	84	85.34%	
04/14/09	560	500	60	89.29%	
04/15/09	572	435	137	76.05%	
04/16/09	582	389	193	66.84%	
04/17/09	599	402	197	67.11%	
04/18/09	550	393	157	71.45%	
04/19/09	576	391	185	67.88%	
04/20/09	634	453	181	71.45%	
04/21/09	748	364	384	48.66%	
04/22/09	1070	401	669	37.48%	
04/23/09	1470	564	906	38.37%	
04/24/09	1740	729	1011	41.90%	
04/25/09	2050	942	1108	45.95%	
04/26/09	2210	1180	1030	53.39%	
04/27/09	2100	1190	910	56.67%	
04/28/09	2120	1110	1010	52.36%	
04/29/09	2280	1040	1240	45.61%	
04/30/09	2860	1060	1800	37.06%	
05/01/09	3510	1170	2340	33.33%	
05/02/09	4100	1210	2890	29.51%	
05/03/09	3620	1290	2330	35.64%	
05/04/09	3040	1350	1690	44.41%	

05/05/09	2900	1230	1670	42.41%	
05/06/09	3450	1420	2030	41.16%	
05/07/09	4770	1540	3230	32.29%	
05/08/09	5770	1810	3960	31.37%	PEAK
05/09/09	5340	2260	3080	42.32%	
05/10/09	5140	2590	2550	50.39%	
05/11/09	5230	2430	2800	46.46%	
05/12/09	5160	1990	3170	38.57%	
05/13/09	5040	1800	3240	35.71%	
05/14/09	4900	1820	3080	37.14%	
05/15/09	4790	1750	3040	36.53%	
05/16/09	4540	1610	2930	35.46%	
05/17/09	4530	1470	3060	32.45%	
05/18/09	4650	1280	3370	27.53%	
05/19/09	4770	1190	3580	24.95%	
05/20/09	4590	1220	3370	26.58%	
05/21/09	4030	1230	2800	30.52%	
05/22/09	3830	1330	2500	34.73%	
05/23/09	3710	1540	2170	41.51%	
05/24/09	3680	1540	2140	41.85%	
05/25/09	3410	1620	1790	47.51%	
05/26/09	2970	1620	1350	54.55%	
05/27/09	3000	1600	1400	53.33%	
05/28/09	2880	1420	1460	49.31%	
05/29/09	2710	1290	1420	47.60%	
05/30/09	2630	1130	1500	42.97%	
05/31/09	2660	998	1662	37.52%	
04/01/10	623	718	-95	115.25%	56.93%
04/02/10	514	826	-312	160.70%	
04/03/10	427	852	-425	199.53%	
04/04/10	316	766	-450	242.41%	
04/05/10	353	695	-342	196.88%	
04/06/10	381	609	-228	159.84%	
04/07/10	336	498	-162	148.21%	
04/08/10	471	446	25	94.69%	
04/09/10	564	403	161	71.45%	
04/10/10	725	411	314	56.69%	
04/11/10	905	522	383	57.68%	
04/12/10	1120	649	471	57.95%	
04/13/10	1200	777	423	64.75%	
04/14/10	1030	1100	-70	106.80%	
04/15/10	1140	827	313	72.54%	

04/16/10	1430	691	739	48.32%	
04/17/10	1800	758	1042	42.11%	
04/18/10	1870	850	1020	45.45%	
04/19/10	1880	1110	770	59.04%	
04/20/10	1840	1070	770	58.15%	
04/21/10	2190	970	1220	44.29%	
04/22/10	2690	1110	1580	41.26%	
04/23/10	2430	1340	1090	55.14%	
04/24/10	1670	1300	370	77.84%	
04/25/10	1360	894	466	65.74%	
04/26/10	1300	768	532	59.08%	
04/27/10	1460	783	677	53.63%	
04/28/10	1760	817	943	46.42%	
04/29/10	1990	868	1122	43.62%	
04/30/10	1590	969	621	60.94%	
05/01/10	1320	828	492	62.73%	
05/02/10	1170	657	513	56.15%	
05/03/10	1040	596	444	57.31%	
05/04/10	1130	555	575	49.12%	
05/05/10	1590	500	1090	31.45%	
05/06/10	2480	476	2004	19.19%	
05/07/10	2400	565	1835	23.54%	
05/08/10	2500	670	1830	26.80%	
05/09/10	2600	641	1959	24.65%	
05/10/10	3150	654	2496	20.76%	
05/11/10	2970	772	2198	25.99%	
05/12/10	2910	728	2182	25.02%	
05/13/10	2520	623	1897	24.72%	
05/14/10	2040	547	1493	26.81%	
05/15/10	1890	487	1403	25.77%	
05/16/10	1960	470	1490	23.98%	
05/17/10	2530	462	2068	18.26%	
05/18/10	3410	503	2907	14.75%	
05/19/10	3150	554	2596	17.59%	
05/20/10	2680	521	2159	19.44%	
05/21/10	3130	459	2671	14.66%	
05/22/10	4100	450	3650	10.98%	
05/23/10	4280	517	3763	12.08%	
05/24/10	3890	849	3041	21.83%	
05/25/10	2950	1050	1900	35.59%	
05/26/10	2520	904	1616	35.87%	
05/27/10	2960	698	2262	23.58%	



05/28/10	4090	673	3417	16.45%	
05/29/10	4980	1150	3830	23.09%	PEAK
05/30/10	4720	1600	3120	33.90%	
05/31/10	4090	1820	2270	44.50%	
04/01/11	362	146	216	40.33%	18.49%
04/02/11	467	113	354	24.20%	
04/03/11	578	99.8	478.2	17.27%	
04/04/11	516	97.2	418.8	18.84%	
04/05/11	476	154	322	32.35%	
04/06/11	528	101	427	19.13%	
04/07/11	588	83.1	504.9	14.13%	
04/08/11	549	67.8	481.2	12.35%	
04/09/11	501	77.5	423.5	15.47%	
04/10/11	455	79.5	375.5	17.47%	
04/11/11	416	62.6	353.4	15.05%	
04/12/11	418	65.5	352.5	15.67%	
04/13/11	388	73.5	314.5	18.94%	
04/14/11	404	70.2	333.8	17.38%	
04/15/11	402	59.6	342.4	14.83%	
04/16/11	402	56.4	345.6	14.03%	
04/17/11	480	58	422	12.08%	
04/18/11	672	58.4	613.6	8.69%	
04/19/11	908	63.2	844.8	6.96%	
04/20/11	948	149	799	15.72%	
04/21/11	973	262	711	26.93%	
04/22/11	969	193	776	19.92%	
04/23/11	932	174	758	18.67%	
04/24/11	932	179	753	19.21%	
04/25/11	845	168	677	19.88%	
04/26/11	801	150	651	18.73%	
04/27/11	724	129	595	17.82%	
04/28/11	665	126	539	18.95%	
04/29/11	666	125	541	18.77%	
04/30/11	634	112	522	17.67%	
05/01/11	614	124	490	20.20%	
05/02/11	560	158	402	28.21%	
05/03/11	540	182	358	33.70%	
05/04/11	521	202	319	38.77%	
05/05/11	539	193	346	35.81%	
05/06/11	618	178	440	28.80%	
05/07/11	769	190	579	24.71%	
05/08/11	1130	213	917	18.85%	

05/09/11	1480	295	1185	19.93%	
05/10/11	1390	327	1063	23.53%	
05/11/11	1320	272	1048	20.61%	
05/12/11	1110	284	826	25.59%	
05/13/11	1040	239	801	22.98%	
05/14/11	1280	221	1059	17.27%	
05/15/11	1620	232	1388	14.32%	
05/16/11	2220	248	1972	11.17%	
05/17/11	2520	272	2248	10.79%	
05/18/11	2190	285	1905	13.01%	
05/19/11	1830	295	1535	16.12%	
05/20/11	1480	245	1235	16.55%	
05/21/11	1290	222	1068	17.21%	
05/22/11	1230	202	1028	16.42%	
05/23/11	1300	196	1104	15.08%	
05/24/11	1410	195	1215	13.83%	
05/25/11	1400	233	1167	16.64%	
05/26/11	1600	230	1370	14.38%	
05/27/11	2060	220	1840	10.68%	
05/28/11	2790	222	2568	7.96%	
05/29/11	3780	250	3530	6.61%	
05/30/11	4110	358	3752	8.71%	PEAK
05/31/11	3520	421	3099	11.96%	
04/01/12	1630	895	735	54.91%	14.43%
04/02/12	1570	876	694	55.80%	
04/03/12	1270	814	456	64.09%	
04/04/12	1040	431	609	41.44%	
04/05/12	998	272	726	27.25%	
04/06/12	1090	208	882	19.08%	
04/07/12	1100	168	932	15.27%	
04/08/12	1120	145	975	12.95%	
04/09/12	1210	123	1087	10.17%	
04/10/12	1380	166	1214	12.03%	
04/11/12	1720	187	1533	10.87%	
04/12/12	1870	209	1661	11.18%	
04/13/12	1520	240	1280	15.79%	
04/14/12	1260	227	1033	18.02%	
04/15/12	1080	207	873	19.17%	
04/16/12	975	174	801	17.85%	
04/17/12	870	192	678	22.07%	
04/18/12	794	214	580	26.95%	
04/19/12	795	170	625	21.38%	

04/20/12	802	172	630	21.45%	
04/21/12	927	176	751	18.99%	
04/22/12	1110	176	934	15.86%	
04/23/12	1460	194	1266	13.29%	
04/24/12	1870	227	1643	12.14%	
04/25/12	2240	237	2003	10.58%	
04/26/12	2470	224	2246	9.07%	
04/27/12	2650	256	2394	9.66%	
04/28/12	2350	285	2065	12.13%	
04/29/12	2000	314	1686	15.70%	
04/30/12	1700	303	1397	17.82%	
05/01/12	1730	238	1492	13.76%	
05/02/12	1780	171	1609	9.61%	
05/03/12	1970	175	1795	8.88%	
05/04/12	2250	170	2080	7.56%	
05/05/12	2590	178	2412	6.87%	
05/06/12	2850	194	2656	6.81%	
05/07/12	2890	197	2693	6.82%	PEAK
05/08/12	2590	214	2376	8.26%	
05/09/12	2440	249	2191	10.20%	
05/10/12	2280	224	2056	9.82%	
05/11/12	2350	173	2177	7.36%	
05/12/12	2430	170	2260	7.00%	
05/13/12	2420	196	2224	8.10%	
05/14/12	2300	218	2082	9.48%	
05/15/12	2220	203	2017	9.14%	
05/16/12	2250	184	2066	8.18%	
05/17/12	2450	151	2299	6.16%	
05/18/12	2550	150	2400	5.88%	
05/19/12	2490	186	2304	7.47%	
05/20/12	2440	170	2270	6.97%	
05/21/12	2500	147	2353	5.88%	
05/22/12	2650	130	2520	4.91%	
05/23/12	2850	124	2726	4.35%	
05/24/12	2740	143	2597	5.22%	
05/25/12	2350	156	2194	6.64%	
05/26/12	2130	150	1980	7.04%	
05/27/12	1970	138	1832	7.01%	
05/28/12	1670	122	1548	7.31%	
05/29/12	1360	136	1224	10.00%	
05/30/12	1260	162	1098	12.86%	
05/31/12	1370	157	1213	11.46%	

04/01/13	291	296	-5	101.72%	25.56%
04/02/13	298	308	-10	103.36%	
04/03/13	297	307	-10	103.37%	
04/04/13	291	323	-32	111.00%	
04/05/13	316	329	-13	104.11%	
04/06/13	333	318	15	95.50%	
04/07/13	338	320	18	94.67%	
04/08/13	312	329	-17	105.45%	
04/09/13	325	327	-2	100.62%	
04/10/13	332	233	99	70.18%	
04/11/13	307	147	160	47.88%	
04/12/13	312	111	201	35.58%	
04/13/13	282	120	162	42.55%	
04/14/13	291	108	183	37.11%	
04/15/13	299	97.3	201.7	32.54%	
04/16/13	339	78.1	260.9	23.04%	
04/17/13	359	61.6	297.4	17.16%	
04/18/13	321	58.6	262.4	18.26%	
04/19/13	282	66.7	215.3	23.65%	
04/20/13	300	60.7	239.3	20.23%	
04/21/13	280	62.4	217.6	22.29%	
04/22/13	334	54.5	279.5	16.32%	
04/23/13	479	51.8	427.2	10.81%	
04/24/13	531	49.1	481.9	9.25%	
04/25/13	570	47.5	522.5	8.33%	
04/26/13	638	46.3	591.7	7.26%	
04/27/13	679	50.6	628.4	7.45%	
04/28/13	845	49	796	5.80%	
04/29/13	1170	46.8	1123.2	4.00%	
04/30/13	1600	53.4	1546.6	3.34%	
05/01/13	1890	48.8	1841.2	2.58%	
05/02/13	1770	38.5	1731.5	2.18%	
05/03/13	1510	53.7	1456.3	3.56%	
05/04/13	1520	54.2	1465.8	3.57%	
05/05/13	1630	57.8	1572.2	3.55%	
05/06/13	1740	90	1650	5.17%	
05/07/13	1410	126	1284	8.94%	
05/08/13	1220	145	1075	11.89%	
05/09/13	1040	152	888	14.62%	
05/10/13	940	147	793	15.64%	
05/11/13	883	133	750	15.06%	
05/12/13	870	131	739	15.06%	

05/13/13	983	113	870	11.50%	
05/14/13	1340	99.8	1240.2	7.45%	
05/15/13	1800	93.5	1706.5	5.19%	
05/16/13	2180	86.9	2093.1	3.99%	
05/17/13	2710	72.9	2637.1	2.69%	
05/18/13	3130	60.4	3069.6	1.93%	PEAK
05/19/13	2780	68.6	2711.4	2.47%	
05/20/13	2180	78.5	2101.5	3.60%	
05/21/13	1870	77	1793	4.12%	
05/22/13	1950	66	1884	3.38%	
05/23/13	2630	65.9	2564.1	2.51%	
05/24/13	3030	70.1	2959.9	2.31%	
05/25/13	3040	102	2938	3.36%	
05/26/13	2850	131	2719	4.60%	
05/27/13	2630	98.5	2531.5	3.75%	
05/28/13	2400	74.9	2325.1	3.12%	
05/29/13	2480	72.2	2407.8	2.91%	
05/30/13	2260	67.2	2192.8	2.97%	
05/31/13	2030	58.2	1971.8	2.87%	
4/1/14	388	467	-79	120.36%	18.67%
4/2/14	455	346	109	76.04%	
4/3/14	414	266	148	64.25%	
4/4/14	351	223	128	63.53%	
4/5/14	348	164	184	47.13%	
4/6/14	330	132	198	40.00%	
4/7/14	317	126	191	39.75%	
4/8/14	316	123	193	38.92%	
4/9/14	382	120	262	31.41%	
4/10/14	562	118	444	21.00%	
4/11/14	783	113	670	14.43%	
4/12/14	1120	113	1007	10.09%	
4/13/14	1230	118	1112	9.59%	
4/14/14	1070	106	964	9.91%	
4/15/14	926	174	752	18.79%	
4/16/14	987	154	833	15.60%	
4/17/14	1010	155	855	15.35%	
4/18/14	1210	178	1032	14.71%	
4/19/14	1620	171	1449	10.56%	
4/20/14	1810	238	1572	13.15%	
4/21/14	2410	267	2143	11.08%	
4/22/14	2730	343	2387	12.56%	
4/23/14	3120	309	2811	9.90%	

4/24/14	2840	290	2550	10.21%	
4/25/14	2500	281	2219	11.24%	
4/26/14	2610	216	2394	8.28%	
4/27/14	2320	179	2141	7.72%	
4/28/14	2060	178	1882	8.64%	
4/29/14	1620	216	1404	13.33%	
4/30/14	1410	209	1201	14.82%	
5/1/14	1230	217	1013	17.64%	
5/2/14	1130	231	899	20.44%	
5/3/14	1190	260	930	21.85%	
5/4/14	1600	279	1321	17.44%	
5/5/14	2180	228	1952	10.46%	
5/6/14	2850	214	2636	7.51%	
5/7/14	3060	176	2884	5.75%	
5/8/14	2760	190	2570	6.88%	
5/9/14	2480	175	2305	7.06%	
5/10/14	2230	163	2067	7.31%	
5/11/14	2220	151	2069	6.80%	
5/12/14	2100	146	1954	6.95%	
5/13/14	1880	157	1723	8.35%	
5/14/14	1530	234	1296	15.29%	
5/15/14	1450	239	1211	16.48%	
5/16/14	1470	254	1216	17.28%	
5/17/14	1810	262	1548	14.48%	
5/18/14	2340	252	2088	10.77%	
5/19/14	2920	214	2706	7.33%	
5/20/14	3330	232	3098	6.97%	
5/21/14	3900	256	3644	6.56%	
5/22/14	4130	261	3869	6.32%	
5/23/14	3980	363	3617	9.12%	
5/24/14	3710	505	3205	13.61%	
5/25/14	3500	530	2970	15.14%	
5/26/14	3110	456	2654	14.66%	
5/27/14	3330	388	2942	11.65%	
5/28/14	4190	397	3793	9.47%	
5/29/14	4770	416	4354	8.72%	
5/30/14	5350	576	4774	10.77%	
5/31/14	5290	922	4368	17.43%	

# EXHIBIT C

<b>58699-WATER RIGHTS - WSR STREAM FLOW</b>		
Note: Data displayed in this report may not have been saved to the database!!		
<b>Project Title:</b> WATER RIGHTS - RIO GRANDE INSTREAM FLOW STUDY		
<b>Budget FY:</b> 2015	<b>Begin Budget FY:</b> 2014	<b>End Budget FY:</b> 2017
<b>State:</b> NM	<b>Congressional District:</b> NM3	<b>Cost Center:</b> LLNMF02000
<b>Admin. State:</b> NM	<b>Admin. Cost Center:</b> LLNMF02000	
<b>Theme:</b>	#17 WATER RIGHTS PROJECTS	
<b>Description:</b>	<p>The Taos Resource Management Plan (2012) calls for the establishment of minimum instream flow studies for all permanent streams in the Field Office. As of FY11 only two studies--one on the Rio Chama and one segment on the Rio Grande--have been completed. The Rio Grande is the largest perennial river in the Taos Field Office and plays a critical role in New Mexico's water resource management. This project would provide a baseline study on water needs for various resources or uses such as riparian habitat, fisheries and recreation. The project area would start at the Colorado State line and at the Rio Arriba and Taos County Line.</p>	
<b>Geographic Description:</b>	RIO GRANDE WILD AND SCENIC RIVER IN NEW MEXICO	
<b>Benefits:</b>	<p>This study is critical to achieving Taos Field Office Resource Management Plan goals. Specifically, the Taos Resource Management Plan calls for initiation of flow studies in all permanent streams in the resource area to establish minimum flows necessary to maintain aquatic habitat. Completion of this study is of interest to stakeholders who use the river and its associated wetlands for various permitted activities. Flow levels are especially important to many small recreation businesses that rely on the Rio Grande. Currently, the Taos Field Office has completed one study on the Rio Chama, the other major Wild and Scenic River in the Taos Field Office and completed a single reach study on the Rio Grande. Ongoing adjudications in the Upper Rio Grande in NM are nearing settlement. Settlement proposals include drilling wells that may reduce flows within the Wild and Scenic River. Therefore, delay in action may imperil Outstanding Resource Values. The programs that need minimum flow information are fisheries, hydrology, wetland/riparian and recreation. Currently, the fisheries and wetland/riparian programs lack sufficient information to establish threshold flow values for biotic community viability. Hydrology needs information from this study to understand channel dynamic and physicochemical processes occurring in the river. Recreation is concerned with maintaining fishing and boating opportunities on the river. This study will provide the Field Office with data and the process to obtain, through lease or purchase, water rights sufficient to maintain aquatic systems. This will help meet two Bureau goals: proper wetland/riparian functioning condition and watershed health. It will also provide critical data to the fisheries program.</p>	
<b>Feasibility:</b>	<p>Currently, both management commitment to and legal authority for this project are strong. The Rio Grande is the largest river in the Field Office and has more Public Lands associated with it than any other river in the area. The Field Office capability to complete this survey is hampered by funding and staff levels. The Taos Field Office anticipates that this study will take 4 to 6 years to complete and require that a significant portion of the work be contracted, either to government labs or private consultants. Based on an initial study contracted in 2009, we anticipate a minimum cost of \$100,000 per sample area (i.e., stream reach). We have identified 4 distinct reaches within the WSR designation. Thus, total cost is estimated to be about \$400,000. Changes in this estimate may occur as reaches are assessed.</p>	
	This project is strongly supported among customers and constituents of Public	



<b>Support/Opposition:</b>	Lands around Taos as evidenced by it's inclusion as a management prescription in the Taos RMP. Numerous state and federal water resource managers in New Mexico have also stated their interest and support. There has been opposition from state and federal authorities in Colorado in past years to this type of study. The Taos Field Office has been active as a member of regional watershed management groups and has worked cooperatively on water issues, which should help reduce concerns. It is likely that this study will not be heavily opposed as it will only affect river segments that have few or no water claims on them. Therefore, it does not seem that past opposition will continue.				
<b>Contact:</b>	GREG GUSTINA		<b>Phone:</b> 575-751-4707		
<b>Email:</b> ggustina@blm.gov					
<b>Project Type:</b>		Standard			
<b>WBS/Funded Program:</b>		LXWSRGRR0000			
<b>Mission Area:</b>		Natural and Cultural Resource Protection			
<b>End Outcome Goal:</b>		Protect America's Landscapes			
<b>Estimated Costs by FY</b>					
FY 2010		\$0.00			
FY 2011		\$0.00			
FY 2012		\$0.00			
FY 2013		\$0.00			
FY 2014		\$100,000.00			
FY 2015		\$100,000.00			
FY 2016		\$100,000.00			
FY 2017		\$100,000.00			
FY 2018		\$0.00			
FY 2019		\$0.00			
FY 2020		\$0.00			
FY 2021		\$0.00			
<b>Total Estimated Costs: \$400,000.00</b>					
<b>Detail Funding Information</b>					
FY	Functional Areas	Requested Funding Src	Requested Amount	Labor Dollars	Operations Dollars
2014	L10100000	FB - Bureau Flexible Funding	\$100,000.00	\$0.00	\$100,000.00
2015	L10100000	FB - Bureau Flexible Funding	\$100,000.00	\$0.00	\$100,000.00
2016	L10100000	FB - Bureau Flexible Funding	\$100,000.00	\$0.00	\$100,000.00
2017	L10100000	FB - Bureau Flexible Funding	\$100,000.00	\$0.00	\$100,000.00
<b>Workload Breakdown</b>					
			<b>Workload</b>	<b>Resource</b>	

FY	Functional Areas	Workload Measure	Measure Unit	Amount
2014	L10100000 - SOIL, WATER, AIR MGMT	BV0000 - Inventory Streams/Riparian Areas (Miles)	15	\$100,000.00
2015	L10100000 - SOIL, WATER, AIR MGMT	BV0000 - Inventory Streams/Riparian Areas (Miles)	15	\$100,000.00
2016	L10100000 - SOIL, WATER, AIR MGMT			\$100,000.00
2017	L10100000 - SOIL, WATER, AIR MGMT			\$100,000.00
<b>Priorities</b>				
Execute Cost Center Submit:		Cost Center Submit: y	State Submit: y	BLM Submit:
Execute Cost Center Priority: 0		Cost Center Priority: 0	State Priority: 4	BLM Priority: 0
Execute Cost Center Submit:		Cost Center Submit: y	State Submit: y	BLM Submit:
Execute Cost Center Priority: 0		Cost Center Priority: 0	State Priority: 2	BLM Priority: 0
Execute Cost Center Submit:		Cost Center Submit: y	State Submit: y	BLM Submit:
Execute Cost Center Priority: 0		Cost Center Priority: 2	State Priority: 2	BLM Priority: 0
<b>Rankings</b>				