

April 12<sup>th</sup>, 2021

Rio Grande Cutthroat Trout Conservation Team

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Dear Conservation Team,

This letter is intended to summarize the 2020 range-wide activities for the conservation of Rio Grande Cutthroat Trout (RGCT) and to provide that information to conservation team leaders. The activities below are divided into eight primary categories identified in the RGCT Conservation Agreement.

### **Population Inventory**

In 2020, 37 waters (41 individual surveys) were inventoried within the historical range of RGCT. The purpose of the inventories was to monitor known populations (27 waters, 31 surveys), assess the genetic status of RGCT populations (5 AFLP tests), collect habitat information (2 waters), and test for diseases (3 waters).

### **Population Maintenance**

Fish barriers were constructed in Willow Creek by NMDGF and in Poso Creek by Jicarilla Apache Nation.

### **Population Expansion**

Seventeen events were classified as population expansion. In the Lower Rio Grande GMU, nonnative fish were removed from 9 creeks using piscicide. Pure RGCT were also reintroduced into Capulin Creek located on Bandelier National Monument. Additionally, a fish barrier was removed in Casias Creek to restore population connectivity in the Rio Costilla basin. In the Rio Grande Headwaters GMU, Sand Creek and Sand Creek lakes were restored using piscicide. Haypress Lake and Roaring Fork were restocked with RGCT after being chemically reclaimed and a total of 32 lakes and streams were stocked with RGCT for angler recreation in Colorado.

**Protecting/Restoring Habitat**

USFS-Carson and Trout Unlimited constructed 4 ungulate exclosures, 10 beaver dam analogs, and 20 post assisted structures in Rio San Antonio. Habitat was restored along 2.1 miles of stream and 77 acres of wetland in Cabresto Creek and Vidal Creek in the Carson National Forest.

**Education**

Colorado Parks and Wildlife presented information regarding RGCT conservation to Living Waters Fly Shop in Texas.

**Database Sharing**

The annual RGCT range-wide database workshop was attended by the GMU leaders from New Mexico and Colorado. The range-wide database was updated with the previous year's data using the online editor.

**Coordination**

The annual RGCT Conservation Team meeting was well attended by all signatory agencies.

**Miscellaneous**

Seven Springs Hatchery in New Mexico completed its annual RGCT spawn, producing over 300,000 fry for conservation and recreational stocking purposes. Taos Pueblo mechanically removed nonnative Brown Trout from 1.7 miles of Rio Lucero to benefit native fishes.

Thank you all for your help developing this report. The success of our work toward RGCT conservation would not be possible without the continued cooperation, dedication, and professionalism of all team members and their respective agencies and organizations.

Sincerely,

Tucker Brauer  
Rio Grande Cutthroat Trout Biologist  
New Mexico Department of Game and Fish

## RGCT Rangewide Report 2020 - Summary by Strategy, January 1 to December 31, 2020

Strategy	Subhead	Title	Waters/Events	Total	Description
1	Survey	Population Inventory	0	0	Survey potential RGCT waters within historical range; maintain database
1	Monitor	Population Inventory	27	31	Monitor RGCT populations to detect changes; maintain database
1	Taxonomy	Population Inventory	5	5	Collect genetic information within historical range, maintain database
1	Habitat Inventory	Population Inventory	2	2	Collect habitat information within historical range; maintain database
1	Disease	Population Inventory	3	3	Conduct fish health surveys including WD
2	Identify	Population Maintenance	0	0	Identify Core Conservation and Conservation populations
2	Secure	Population Maintenance	1	1	Secure and enhance distribution and abundance of Conservation and Core Conservation populations
2	Metapopulation	Population Maintenance	0	0	Identify, maintain, and expand connectivity within metapopulations
3	Restore	Population Expansion	12	12	Increase RGCT populations by restoring RGCT habitat through chemical reclamation
3	Augment	Population Expansion	3	3	Augment pure populations within historical range by stocking or transplanting RGCT
3	Connectivity	Population Expansion	1	1	Promote and restore connectivity of populations to enhance metapopulation function
3	Stock RGCT	Population Expansion	1	32	Stock lakes and streams with RGCT for angler recreation (sum of lakes and streams stocked)
4	Improve	Protect sustaining habitat and restore degraded habitat	8	8	Inventory, maintain, protect, and improve existing habitat; improve fluvial/ hydrological processes
4	Unoccupied	Protect sustaining habitat and restore degraded habitat	0	0	Identify unoccupied habitat for restoration with RGCT
5	Education	Conservation Education and Interpretation	1	1	Subcommittee to develop education and interpretation program providing deliverables and a consistent message regarding RGCT conservation efforts
6	Database	Database Sharing	2	2	Summarize distribution, population genetics and habitat data; centralize data into a database; allow rangewide integrated data analysis, summaries, and comparisons
7	Coordinate	Planning/ Coordination	16	18	Share information; identify/ discuss/ solve common conservation problems; prioritize issues
A*	Miscellaneous	Other Activities/ Actions	2	2	Accomplishments that are not listed in the other titles or strategies
B	Habitat	Private Land Protection or Restoration (stream miles)	0	0	Landowner/ private land habitat protection or restoration

**Rio Grande Cutthroat Trout Rangewide Report 2020 - Summary by Signatory Agency, January 1 to December 31, 2020**

Year	GMU	Population Code	Water	Water Code	HUC	Biologist	Agency	Strategy	Subhead	Activity	Units Accomplished	Comments
<b>Colorado Parks and Wildlife</b>												
2020	Rio Grande Headwaters	13010004cp003	Cross Creek	38581	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010004cp003	Jacks Creek	38579	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010002cp005	Jim Creek	44254	Alamosa-Trinchera	Vigil	CPW	1	Monitor	Population Monitoring	2	
2020	Rio Grande Headwaters	13010005cp006	Osier Creek	44444	Conejos	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010002cp016	Wagon Creek	44456	Alamosa-Trinchera	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010002cp014	South Fork West Indian Creek	39530	Alamosa-Trinchera	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010002cp014	West Indian Creek	44709	Alamosa-Trinchera	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010004cp001	Whale Creek	42420	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	1	
2020	Rio Grande Headwaters	13010002cp021	Placer Creek	44711	Alamosa-Trinchera	Cammack	CPW	1	Monitor	Population Monitoring	2	
2020	Rio Grande Headwaters	13010005cp008	Lake Fork of Conejos River	39289	Conejos	Cammack	CPW	1	Monitor	Population Monitoring	2	
2020	Rio Grande Headwaters					Vigil	CPW	3	Stock RGCT	Recreation stocking	32	Stocked 32 Recreational RGCT waters
2020	Rio Grande Headwaters					Vigil	CPW	6	Database	Updated RGCT database	1	
2020	Rio Grande Headwaters	13010001cp001	Haypress Lake	90388	Rio Grande Headwaters	Vigil	CPW	3	Augment	Post-restoration stocking	1	Stocked Haypress Lake with 6500 fry spawned from Brood Stock
2020	Rio Grande Headwaters		Roaring Fork	42616	Rio Grande Headwaters	Vigil	CPW	3	Augment	Post-restoration stocking	1	Stocked Roaring Fork with fry spawned from Brood Stock
2020	Rio Grande Headwaters					Vigil	CPW	7	Coordinate	Planned and attend RGCT range-wide meeting	1	
2020	Rio Grande Headwaters	13010005cp006	Osier Creek	44444	Conejos	Vigil	CPW	1	Disease	Population Monitoring	1	Fish Health monitoring at Osier Creek
2020	Rio Grande Headwaters		Sand Creek	42856	San Luis	Vigil	CPW	3	Restore	Chemically treated approximately 4 miles of stream with rotenone to remove non-native fish	1	
2020	Rio Grande Headwaters		Upper Sand Creek Lake	81163	San Luis	Vigil	CPW	3	Restore	Chemically treated with rotenone to remove non-native fish	1	
2020	Rio Grande Headwaters		Lower Sand Creek Lake	81151	San Luis	Vigil	CPW	3	Restore	Chemically treated with rotenone to remove non-native fish	1	
2020	Rio Grande Headwaters					Vigil	CPW	5	Education	Presented RGCT conservation strategy to Living Waters Fly Shop in TX	1	

**New Mexico Game and Fish**

2020	Pecos Headwaters		Jacks Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Pecos Headwaters		Cave Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Pecos Headwaters		Macho Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Pecos Headwaters		Dalton Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Pecos Headwaters		Bear Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Rio Chiquito			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Palociento Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Canjilon Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Jaroso Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Powderhouse Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Comanche Creek			Brauer	NMDGF	1	Monitor	Population Monitoring	1	
2020	Lower Rio Grande		Rio Costilla			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Comanche Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Blind Canyon			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		La Cueva Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Powderhouse Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Fernandez Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Midge Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Turner Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Chuckwagon Creek			Brauer	NMDGF	3	Restore	Piscicide application to remove NN	1	
2020	Lower Rio Grande		Capulin Creek			Brauer	NMDGF	3	Augment	Transfer 46 fish into Capulin Creek from Palociento Creek (BNM)	1	Conducted with Bandelier National Monument (NPS)
2020	Lower Rio Grande					Brauer	NMDGF	6	Database	Updated RGCT database	1	
2020	Lower Rio Grande		Rio Chiquito			Brauer	NMDGF	1	Disease	Fish Health Testing	1	
2020	Lower Rio Grande		Palociento Creek			Brauer	NMDGF	1	Disease	Fish Health Testing	1	
2020	Lower Rio Grande					Brauer	NMDGF	7	Coordinate	Attended RGCT Rangewide meeting	1	
2020	Pecos Headwaters		Cave Creek			Brauer	NMDGF	1	Taxonomy	Genetic Testing	1	
2020	Lower Rio Grande		Dalton Creek			Brauer	NMDGF	1	Taxonomy	Genetic Testing	1	
2020	Lower Rio Grande		Jaroso Creek			Brauer	NMDGF	1	Taxonomy	Genetic Testing	1	
2020	Lower Rio Grande		Canjilon Creek			Brauer	NMDGF	1	Taxonomy	Genetic Testing	1	

2020	Canadian		Luna Creek			Bakevich/Glover	NMDGF	1	Taxonomy	Genetic Testing	1	
2020	Lower Rio Grande		Costilla			Leinonen	TEI	1	Monitor	Population Inventory	1	Multiple age classes represented. Evidence of reproduction success
2020	Lower Rio Grande		Casias			Leinonen	TEI	1	Monitor	Population Inventory	1	Multiple age classes represented. Evidence of reproduction success
2020	Canadian		Leandro			Leinonen/Armstrong	TEI/NMSU	1	Monitor	Population Inventory	2	Multiple age classes represented. Evidence of reproduction success
2020	Lower Rio Grande		Casias			Leinonen	TEI	3	Connectivity	Population Maintenance	1	Removed fish migration barrier
2020	Canadian		Little Vermejo			Armstrong	NMSU	1	Monitor	Population Inventory	1	
2020	Lower Rio Grande		Rito de los Pinos			Armstrong	NMSU	1	Monitor	Population Inventory	1	
2020	Lower Rio Grande					Leinonen	TEI	7	Coordinate	Attended RGCT Rangewide meeting	1	
2020						Jacobsen	NMDGF	A	Miscellaneous	Seven Springs Hatchery Spawn	1	Produced 300,000 eggs
<b>United States Forest Service - Colorado</b>												
2020						Remshardt, Janowsky	USFS	7	Coordinate	Attend Rangewide Meeting	1	
<b>United States Forest Service - New Mexico</b>												
2020	Lower Rio Grande		Rio San Antonio	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Construct 2 riparian/stream channel ungulate exclosures (2 acres each)
2020	Lower Rio Grande		Rio San Antonio	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Construct 2 riparian/stream channel ungulate exclosures (stream miles enclosed)
2020	Lower Rio Grande		Rio San Antonio	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Construct 10 Beaver Dam Analogs (BDA) and 20 Post Assisted Log Structures (PALS)
2020	Lower Rio Grande		Cabresto Creek	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Stabilize headwater stream channels associated wetlands that drain into native RGCT stream.
2020	Lower Rio Grande		Cabresto Creek	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Stabilize headwater stream channels associated wetlands that drain into native RGCT stream.
2020	Lower Rio Grande		Vidal Ck (Comanche Ck trib)	1.3E+11	Long	USFS	4	Improve	Habitat improvement		1	Stabilize headwater stream channel with erosion and flow control structures.
2020	Lower Rio Grande		Vidal Ck (Comanche Ck trib)		Long	USFS	4	Improve	Habitat improvement		1	Stabilize headwater stream channels associated wetlands that drain into native RGCT stream.
2020	Lower Rio Grande		Comanche Ck	1.3E+11	Long	USFS	3	Restore	Pesticide application to Remove NN			Rotenone treatment of portions of Comanche Ck and certain tributaries
2020	Lower Rio Grande		Rio Costilla Ck	1.3E+11	Long	USFS	3	Restore				Rotenone treatment of portions of Rio Costilla Ck (downstream of confluence with Comanche Ck to fish migration barrier)
2020	Lower Rio Grande		Rio Costilla Ck	1.3E+11	Long	USFS	3	Restore				Rotenone treatment of portions of Rio Costilla Ck and certain tributaries (upstream of confluence with Comanche Ck)
2020					Long	USFS	7	Coordinate	Attend Rangewide Meeting		1	
<b>United States Fish and Wildlife Service</b>												
2020	Lower Rio Grande	13020101cd001	Costilla Creek		13020101		USFWS	7	Coordinate	Funded two barrier removals with Vermejo Park Ranch on Costilla Creek and Casias Creek	2	Work is in progress
2020							USFWS	7	Coordinate	Attend Rangewide Meeting	1	
<b>Bureau of Land Management - Colorado</b>												
2020							BLM	7	Coordinate	Attend Rangewide Meeting	1	
<b>Bureau of Land Management - New Mexico</b>												
2020							BLM	7	Coordinate	Attend Rangewide Meeting	1	
<b>National Parks Service - Colorado</b>												
2020							NPS	7	Coordinate	Attend Rangewide Meeting	1	
<b>National Parks Service - New Mexico</b>												
2020						Milligan	NPS	7	Coordinate	Attend Rangewide Meeting	1	
<b>Taos Pueblo</b>												
2020	Lower Rio Grande		Rio Lucero			C.J Vialpando	Taos Pueblo	1	Monitor	Population Monitoring	1	2 miles of stream was surveyed in July 2020. In total, 77 RGCT were captured during the
2020	Lower Rio Grande		Rio Lucero			C.J Vialpando	Taos Pueblo	A	Miscellaneous	Nonnative Removal	1	October 2020. Approximately 1.7 miles of stream was surveyed on the Rio Lucero
2020						C.J Vialpando	Taos Pueblo	7	Coordinate	Attend Rangewide Meeting	1	station at the mouth of Rio
<b>Jicarilla Apache Nation</b>												
2020			Poso Creek			J. Mazzone	JGFD	4	Improve	Construct terminal fish barrier	1	
2020			Poso Creek			J. Mazzone	JGFD	7	Coordinate	Design/fund terminal fish barrier	1	
2020						J. Mazzone	JGFD	7	Coordinate	Attend Range Wide Meeting	1	
2020			Poso Creek			J. Mazzone	JGFD	7	Coordinate	Coordinate Access/Construction	2	
2020			Poso Creek			J. Mazzone	JGFD	1	Monitor	Monitor Temperature	1	
2020			Little Willow Creek			J. Mazzone	JGFD	7	Coordinate	USACO Reporting Willow Creek	1	
2020			Little Willow Creek			J. Mazzone	JGFD	1	Monitor	Monitor Temperature	1	
<b>Mescalero Apache Tribe</b>												



