



COLORADO

Parks and Wildlife

Department of Natural Resources

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June 10, 2020

Rio Grande Cutthroat Trout Conservation Team

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Dear Conservation Team,

This letter is intended to summarize the 2018 range-wide activities for the conservation of the Rio Grande cutthroat trout (RGCT) and to provide that information to conservation team leaders. The activities below are divided into eight main categories identified in the RGCT Conservation Agreement

(<http://cpw.state.co.us/Documents/Research/Aquatic/CutthroatTrout/2013RGCTConservationAgreement.pdf>).

Population Inventory

In 2018, 24 waters (48 individual surveys) were inventoried within the historical range of RGCT. The purpose of the inventories was to survey potentially occupied RGCT waters (3 waters, 7 sites), monitor known populations (14 waters, 34 sites), assess the genetic status of RGCT populations (3 AFLP tests), and test for diseases (4 waters, 4 sites).

Population Maintenance

Sympatric non-native fish were mechanically removed from Jim Creek in Colorado and Columbine Creek in New Mexico.

New Mexico removed 3 fish migration barriers on Costilla, Beaver and Allen Creeks to restore connectivity in restored populations.



Population Expansion

Eleven events were classified as population expansion. In New Mexico, Rito de los Frijoles, Las Animas Creek, Rio Costilla, Casias Creek, and Costilla Creek were stocked with RGCT. In Colorado, Haypress Lake was stocked with RGCT from Osier Creek and Medano Creek. The first successful spawning operation since the rebuilding of the Haypress Lake brood stock in Colorado produced 114 RGCT that were stocked into the lake.

Protecting/Restoring Habitat

The Rio Grande National Forest in Colorado replaced a culvert on Middle Fork of Carnero Creek to increase connectivity of the stream. The Carson National Forest in New Mexico constructed rock dams for channel stabilization on Bitter Creek and the Ring Drainage, reconstructed top rail fence to protect riparian vegetation on Rio San Antonio, and built livestock enclosure fences on the Rio San Antonio to protect riparian vegetation. The Jicarilla Apache Nation constructed a fish migration barrier on Willow Creek.

Education

NMDGF presented RGCT information to various RGCT conservation groups. The Jicarilla Apache Nation hosted Wild C.O.R.E. event.

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 2019 data using the online editor.

Coordination

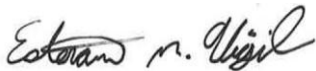
The annual rangewide meeting was well attended by all signatory agencies.

Miscellaneous

Miscellaneous activities included continued wild and hatchery spawning operations.

Thank you for your participation in 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,



Estevan Vigil
Aquatic Biologist
Colorado Parks and Wildlife

RGCT Rangewide Report 2019 - Summary by Strategy, January 1 to December 31, 2019

Strategy	Subhead	Title	Waters/Events	Total	Description
1	Survey	Population Inventory	3	7	Survey potential RGCT waters within historical range; maintain database
1	Monitor	Population Inventory	14	34	Monitor RGCT populations to detect changes; maintain database
1	Taxonomy	Population Inventory	3	3	Collect genetic information within historical range; maintain database
1	Habitat Inventory	Population Inventory	0	0	Collect habitat information within historical range; maintain database
1	Disease	Population Inventory	4	4	Conduct fish health surveys including WD
2	Identify	Population Maintenance	0	0	Identify Core Conservation and Conservation populations
2	Secure	Population Maintenance	4	3	Secure and enhance distribution and abundance of Conservation and Core Conservation populations
2	Metapopulation	Population Maintenance	3	3	Identify, maintain, and expand connectivity within metapopulations
3	Restore	Population Expansion	3	3	Increase RGCT populations by restoring RGCT habitat through chemical reclamation
3	Augment	Population Expansion	1	1	Augment pure populations within historical range by stocking or transplanting RGCT
3	Connectivity	Population Expansion	0	0	Promote and restore connectivity of populations to enhance metapopulation function
3	Stock RGCT	Population Expansion	7	63	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	2	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	2	4	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	6	7	Share information; identify/ discuss/ solve common conservation problems; prioritize issues
A*	Miscellaneous	Other Activities/ Actions	0	0	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 2019

New Mexico Game and Fish												
Year	GMU	Population Code	Water	Water Code	HUC	Biologist	Agency	Strategy	Subhead	Activity	Units	Comments
2019			Costilla			Leinonen	TEI	1	Monitor	Population Inventory	7	Multiple age classes represented. Evidence of Multiple age classes represented. Evidence of Multiple age classes represented. Evidence of
2019			Casias			Leinonen	TEI	1	Monitor	Population Inventory	5	
2019			Ricardo			Leinonen	TEI	1	Monitor	Population Inventory	1	
2019			Costilla			Leinonen	TEI	2	Metapopulation	Population Maintenance	1	Removed fish migration barrier
2019			Beaver			Leinonen	TEI	2	Metapopulation	Population Maintenance	1	Removed fish migration barrier
2019			Allen			Leinonen	TEI	2	Metapopulation	Population Maintenance	1	Removed fish migration barrier
2019			Rito de los Frijoles			Brauer	NMDGF	1	Monitor	Population Inventory	2	Surveyed 2 sites - 100m depletion
2019			Rito de los Frijoles			Brauer	NMDGF	3	Stock RGCT	Population Expansion	1	Stocked 114 RGCT from El Rito
2019			Costilla Reservoir			Brauer	NMDGF	1	Monitor	Population Inventory	6	6 overnight gill net sets
2019			El Rito			Brauer	NMDGF	1	Monitor	Population Inventory	1	Spot Shocking survey
2019			Las Animas Creek			Brauer	NMDGF	3	Stock RGCT	Population Expansion	1	Stocked 134 RGCT from Canones Creek
2019			Comanche Creek			Brauer	NMDGF	1	Monitor	Population Inventory	1	Spot Shocking survey
2019			Comanche Creek			Brauer	NMDGF	1	Monitor	Population Inventory	1	EDNA survey
2019			Cow Creek			Brauer	NMDGF	1	Taxonomy	Population Inventory	1	Genetic sample collection
2019			Willow Creek			Brauer	NMDGF	2	Secure	Barrier Maintnance	1	Designed new barrier
2019			Rio Costilla			Brauer	NMDGF	3	Stock RGCT	Population Expansion	1	Stocked with fish from Hatchery
2019			Casias Creek			Brauer	NMDGF	3	Stock RGCT	Population Expansion	1	Stocked with fish from Hatchery
2019			Costilla Creek			Brauer	NMDGF	3	Stock RGCT	Population Expansion	1	Stocked with fish from Hatchery
2019			Canones Creek			Brauer	NMDGF	1	Monitor	Population Inventory	1	Spot shocking survey
2019			Powderhouse Creek			Brauer	NMDGF	1	Monitor	Population Inventory	1	EDNA Survey
2019			Turner Creek			Brauer	NMDGF	1	Monitor	Population Inventory	1	EDNA Survey
2019			Macho Creek			Brauer	NMDGF	1	Taxonomy	Population Inventory	1	Genetic Sample collection
2019			Seven Springs Hatchery			Brauer	NMDGF	1	Taxonomy	Population Inventory	1	Genetic Sample Collection
2019			Cow Creek			Brauer	NMDGF	2	Secure	Barrier analysis	1	Barrier efficacy analysis
2019						Brauer	NMDGF	5	Education	Public outreach	3	Presentations to various RGCT conservation groups
2019						Brauer	NMDGF	7	Planning/Coordinate	Attend Rangewide meeting	1	
2019			Canones Creek			Brauer	NMDGF	1	Disease	Fish Health Survey	1	
2019			El Rito			Brauer	NMDGF	1	Disease	Fish Health Survey	1	

Colorado Parks and Wildlife												
2019	Rio Grande Headwaters	13010004cd011	South Fork Carnero Creek	38807	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	2	
2019	Rio Grande Headwaters	13010004cd013	Middle Fork Carnero Creek	38782	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	4	
2019	Rio Grande Headwaters	13010004cd009	Prong Creek	38271	Saguache	Vigil	CPW	1	Monitor	Population Monitoring	1	
2019	Rio Grande Headwaters					Vigil	CPW	3	Stock RGCT	Recreation stocking	30	
2019	Rio Grande Headwaters					Vigil	CPW	6	Database	Updated RGCT database	1	
2019	Rio Grande Headwaters		Haypress Lake			Vigil	CPW	3	Restore	Post-restoration stocking	1	
2019	Rio Grande Headwaters					Vigil	CPW	7	Coordinate	Attend Rangewide meeting	1	
2019	Rio Grande Headwaters					Vigil	CPW	3	Stock RGCT	Recreation stocking	28	Stocked recreation RGCT into 28 lakes/streams
2019	Rio Grande Headwaters					Vigil	CPW	6	Database	Updated RGCT database	1	Updated RGCT database with 2018 data
2019	Rio Grande Headwaters	13010001cp001	Haypress Lake	90388	Rio Grande Headwaters	Vigil	CPW	3	Restore	Post-restoration stocking	1	Stocked 157 RGCT through direct transplants from Osier and Madona creeks
2019	Rio Grande Headwaters					Vigil	CPW	7	Coordinate	Attend Rangewide meeting	1	Attended RGCT range-wide meeting
2019	Rio Grande Headwaters	13010001cp001	Haypress Lake	90388	Rio Grande Headwaters	Vigl	CPW	3	Restore	Post-restoration stocking	1	Stocked 114 YOY RGCT from spawning operation at Haypress Lake
2019	Rio Grande Headwaters	13010005cp006	Osier Creek	44444	Conejos	Vigil	CPW	1	Disease	Population Monitoring	1	Fish Health monitoring at Osier Creek
2019	Rio Grande Headwaters	13010005cp010	Cascade Creek	40147	Conejos	Vigil	CPW	1	Disease	Population Monitoring	1	Fish Health monitoring at Cascade Creek
2019	Rio Grande Headwaters	13010002cp005	Jim Creek	44254	Alamosa-Trinchera	Vigil	CPW	2	Secure	Population Maintenance	1	Remove non-native Brook Trout from Jim Creek
United States Forest Service - Colorado												
2019	Saguache	13010004cd013	Middle Fork Carnero Creek		13010004	Remshardt	RGNF	4	Improve	Replace culvert 13010004br015 with open arch	1	replaced fall 2019, included spot survey at location with documented RGCT presence.
United States Forest Service - New Mexico												
2019	53		Columbine Ck (Red River WS)		130201010303	Yvette Paroz	CANF	2	Secure	Population Maintenance	1	Use electro shockers to remove german brown
2019	53		Bitter Ck (Red River WS)		130201010301	George Long	CANF	4	Improve	Midnight Meadows_Bitter Ck Stream Channel stabilization and restoration.	1	Constructed Rock dams to stabilize channel and adjacent wetland habitat
2019	52		Canada del los Ranchos - Rio San Antonio		130100050302	Mariya Osipchuk	CANF	4	Improve	Stewart Meadows Toprail replacement	1	Reconstruct Toprail fence with metal pipe to protect riparian vegetation
2019	55A		Ring Drnge (Canadian Rv WS)		110800020203	George Long	CANF	4	Improve	Restore Hydrologic Function	1	Constr Rock dams to stabilize channel and adjacent riparian habitat
2019	52		Canada Tio Grande - Rio San Antonio		130100050301	Mariya Osipchuk	CANF	4	Improve	Construct fenced riparian vegetation livestock exclosure A	1	Construct riparian vegetation exclosure
2019	52		Canada Tio Grande - Rio San Antonio		130100050301	Mariya Osipchuk	CANF	4	Improve	Construct fenced riparian vegetation livestock exclosure B	1	Construct riparian vegetation exclosure
2019	52		Canada Tio Grande - Rio San Antonio		130100050301	Mariya Osipchuk	CANF	4	Improve	Construct fenced riparian vegetation livestock exclosure C	1	Construct riparian vegetation exclosure

Bureau of Land Management - New Mexico

2019 7 Planning/Coordinate Attend Rangewide meeting 1

Bureau of Land Management - Colorado

2019 7 Planning/Coordinate Attend Rangewide meeting 1

US Fish and Wildlife Service

2019 7 Planning/Coordinate Attend Rangewide meeting 1

National Park Service - New Mexico

2019 7 Planning/Coordinate Attend Rangewide meeting 1

National Park Service - Colorado

2019 7 Planning/Coordinate Attend Rangewide meeting 1

Jicarilla Apache Game and Fish

2019	J. Mazzone	JGFD	4	Improve	Construct terminal fish barrier	1	Willow Creek
2019	J. Mazzone	JGFD	7	Coordinate	Design/fund terminal fish barrier	1	el Poso Creek
2019	J. Mazzone	JGFD	7	Coordinate	Attend Range Wide Meeting	1	
2019	J. Mazzone	JGFD	7	Coordinate	Coordinate Access/Construction	2	
2019	J. Mazzone	JGFD	1	Monitoring	Monitor Temperature	1	
2019	J. Mazzone	JGFD	5	Education	Education	1	Jicarilla Wild C.O.R.E event