



COLORADO

Parks and Wildlife

Department of Natural Resources

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Rio Grande Cutthroat Trout Conservation Team

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Dear Conservation Team,

This letter is intended to inform team members and summarize the 2015 rangewide activities for the conservation of the Rio Grande cutthroat trout (RGCT). The activities below are divided into eight main categories identified in the rangewide agreement (<http://cpw.state.co.us/Documents/Research/Aquatic/CutthroatTrout/2013RGCTConservationAgreement.pdf>). The following is a brief summary of those activities that occurred in 2015.

Population Inventory

In 2015, 22 waters (64 individual surveys) were inventoried within the historical range of RGCT. The purpose of the inventories was to survey potentially occupied RGCT waters (5 waters, 26 survey sites), monitor known populations (2 waters, 2 survey sites), assess the genetic status of RGCT populations (12 AFLP tests), collect disease information (2 waters), and collect habitat information within the historical range (1 water, 22 survey sites).

Population Maintenance

Sympatric non-native fish were mechanically removed from Frijoles Creek and Rio Cebolla. Barrier design work was conducted for barriers to be installed on South Fork Bonito Creek and Rio Costilla.



Population Expansion

Nine events were classified as population expansion. A total of 59 lakes and streams were stocked with Rio Grande cutthroat trout (4 of the waters were post-project stocking, 55 waters were stocked for angler recreation). In the lower Rio Grande GMU, a chemical reclamation project was conducted twice on 17 miles in Casias Creek and Costilla Creek; Costilla Reservoir (300 acres) and its tributaries were also chemically reclaimed. In the Rio Grande Headwaters GMU, the Roaring Fork drainage (8 miles) and Haypress Lake (25 surface acres) were chemically reclaimed to restore Colorado's RGCT broodstock.

Protecting/Restoring Habitat

In the Rio Grande Headwaters GMU, work continued on the riparian fencing project on Jim Creek. Post-fire surveys of Kitty Creek and Hope Creek showed that brook trout had survived the fire in the upper part of the drainage; no brook trout were found in Kitty Creek.

Education

RGCT educational activities in the Rio Grande Headwaters GMU included production/distribution of RGCT educational posters, talks at local youth camps, talks at fishing clinics, and a presentation at the local Trout Unlimited chapter. In New Mexico, RGCT educational activities included presentations at two AFS meetings, a presentation at a Trout Unlimited meeting, the Annual Native Fish in the Classroom event, and the Eight Northern Pueblos Tribal Youth Environmental Summer Camp.

Database Sharing

The annual RGCT rangewide database workshop was attended by the GMU leaders from New Mexico and Colorado. The rangewide database was updated with the 2015 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 conservation and persistence of Rio Grande cutthroat trout would not be possible without the continued cooperation, dedication, and professionalism of every team member and their respective agencies.

Sincerely,

Benjamin W Felt

Benjamin W. Felt
Aquatic Biologist

RGCT Rangewide Report 2015 - Summary by Strategy, January 1 to December 31, 2015

Strategy	Subhead	Title	Waters/Events	Total	Description
1	Survey	Population Inventory	5	26	Survey potential RGCT waters within historical range; maintain database
1	Monitor	Population Inventory	2	2	Monitor RGCT populations to detect changes; maintain database
1	Taxonomy	Population Inventory	12	12	Collect genetic information within historical range, maintain database
1	Habitat Inventory	Population Inventory	1	22	Collect habitat information within historical range; maintain database
1	Disease	Population Inventory	2	2	Conduct fish health surveys including WD
2	Identify	Population Maintenance	0	0	Identify Core Conservation and Conservation populations
2	Secure	Population Maintenance	4	7	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	6	387	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	2	42	Stock lakes and streams with RGCT for angler recreation (sum of lakes and streams stocked)
4	Improve	Protect sustaining habitat and restore degraded habitat	1	2	Inventory, maintain, protect, and improve existing habitat; improve fluvial/ hydrological processes
4	Unoccupied	Protect sustaining habitat and restore degraded habitat	1	2	Identify unoccupied habitat for restoration with RGCT
5	Education	Conservation Education and Interpretation	7	31	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	17	24	Share information; identify/ discuss/ solve common conservation problems; prioritize issues
A*	Miscellaneous	Other Activities/ Actions	6	6	Accomplishments that are not listed in the other titles or strategies
B	Habitat	Private Land Protection or Restoration (stream miles)	1	1	Landowner/ private land habitat protection or restoration

Rio Grande Cutthroat Trout Rangewide Report 2015 - Summary by Signatory Agency, January 1 to December 31, 2015

Year	GMU	Population Code	Water	Water Code	HUC	Biologist	Agency	Strategy	Subhead	Activity	Units Accomplished	Comments
Colorado Parks and Wildlife												
2015	Rio Grande Headwaters	13010005cp006	Osier Creek	44444	13010005	Felt	CPW	1	Monitor	Two Pass Removal Survey	1	270 fish/mile.
2015	Rio Grande Headwaters		Roaring Fork	42616	13010001	Felt	CPW	1	Monitor	Single Pass Survey / Gill Net Survey	1	Single pass electrofishing of portion of Roaring Fork drainage following the chemical reclamation project. Gill Net survey of Wyley lakes in treatment area to confirm effectiveness of project. More electrofishing and eDNA is scheduled for 2016 to confirm drainage is fishless.
2015	Rio Grande Headwaters	13010004cp006	Big Springs Creek	38281	13010004	Felt / Rogers	CPW	1	Taxonomy	AFLP Analysis	1	100% Pure RGCT (Standard AFLP), 99% Pure RGCT (RG-CR AFLP).
2015	Rio Grande Headwaters	13010002cp008	Jaroso Creek	48066	13010002	Felt / Rogers	CPW	1	Taxonomy	AFLP Analysis	1	100% Pure (Standard AFLP).
2015	Rio Grande Headwaters	13010005cp006	Osier Creek	44444	13010005	Felt / Rogers	CPW	1	Taxonomy	AFLP Analysis	1	Fin Clips Degraded - Genetic analysis not conducted.
2015	Rio Grande Headwaters	13010001cp001	Haypress Lake	90388	13010001	Felt	CPW	1	Disease	Fish Health Assessment	1	Cutthroat tested positive for Bacterial Kidney Disease.
2015	Rio Grande Headwaters	13010001cp001	Haypress Lake / Roaring Fork	90388 / 42616	13010001	Felt	CPW	3	Restore	Chemical Reclamation	36	Chemically treated Haypress Lake (25 surface acres) and Roaring Fork drainage (8 miles) and 2 ponds in Roaring Fork drainage (3 surface acres) to restore RGCT broodstock in Haypress Lake and remove brook trout from Roaring Fork which provides water to Haypress Lake.
2015	Rio Grande Headwaters	13010001cp001	Haypress Lake	90388	13010001	Felt	CPW	3	Stock RGCT	RGCT Stocking	5	Salvaged 2,000 RGCT from Haypress Lake during spawntake operation and moved to nearby recreational waters.
2015	Rio Grande Headwaters					Crowder / Felt / Lamar	CPW	3	Stock RGCT	Flight plants of RGCT in recreational waters	37	Stocked 40,411 RGCT through flight plants of Pitkin Hatchery RGCT in 37 waters.
2015	Rio Grande Headwaters		Kitty Creek / Hope Creek	39017 / 47337	13010001	Felt / Terry	CPW / TU	4	Unoccupied	Scouting of streams that burned during the 2013 West Fork Fire complex.	2	No fish found in Kitty Creek. Brook trout found in upper Hope Creek in wilderness.

Rio Grande Cutthroat Trout Rangewide Report 2015 - Summary by Signatory Agency, January 1 to December 31, 2015

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2015	Rio Grande Headwaters	13010002cp005	Jim Creek	44254	13010002	Terry	TU	4	Improve	Riparian Fencing	2	Continued efforts to fence two miles of Jim Creek that is heavily impacted by grazing.
2015	Rio Grande Headwaters					Felt	CPW	5	Education	Public Presentations	3	Discussed importance of RGCT conservation at a kids fishing clinic, local TU meeting, and Costilla County Youth camp.
2015	Rio Grande Headwaters					Terry	TU	5	Education	Creation and distribution of RGCT poster	1	Created a "get to know your native" RGCT educational poster and signs for distribution across RGCT range.
2015	Rio Grande Headwaters					Felt / Alves	CPW	6	Database	Database maintenance	1	Entered 2014 data into database.
2015	Rio Grande Headwaters					Felt / Alves		7	Coordinate	Annual Meeting	1	Attended annual rangewide meeting and gave update on Rio Grande Headwaters GMU.
2015	Rio Grande Headwaters					Felt	CPW	7	Coordinate		1	Summarized accomplishments in this form and gathered accomplishments from other signatory agencies to generate annual accomplishments report.
2015	Rio Grande Headwaters					Felt	CPW	A	Miscellaneous	Wild spawntake at Haypress Lake	1	Approximately 150,000 eggs were collected during wild spawntake at Haypress Lake. These were subsequently destroyed when Bacterial Kidney disease was found in disease sample.
2015	Rio Grande Headwaters					Lamar / Crowder	CPW	A	Miscellaneous	Hatchery spawntake at Pitkin Hatchery	1	40,411 eggs spawned at Pitkin Fish Hatchery and transferred to Monte Vista Hatchery for flight plants of RGCT.
2015	Rio Grande Headwaters		Haypress Lake			Alves	CPW	B	Habitat	Dam Repair Investigation	1	Financially supported owner of Haypress Lake in preliminary work to determine what repairs on Haypress Lake dam (if any) are necessary to stop leakage and secure Haypress Lake into the future.
New Mexico Game and Fish												
2015	Lower Rio Grande	13020101cp028	East Fork Santa Barbara		13020101	Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	100% RGCT.
2015	Lower Rio Grande	13020101cp027	Middle Fork Santa Barbara		13020101	Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	100% RGCT.

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2015	Lower Rio Grande	13020101cp029	West Fork Santa Barbara		13020101	Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	>99% RGCT, slight introgression of YSCT.
2015	Lower Rio Grande	13020102cp001	Nabor Creek		13020102	Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	100% RGCT.
2015	Lower Rio Grande	13020101cp010	Bitter Creek		13020101	Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	>99% RGCT, slight introgression of RBT.
2015			7 Springs Hatchery broodstock			Bakevich	NMDGF	1	Taxonomy	Genetic analysis - AFLP	1	100% RGCT.
2015	Lower Rio Grande		Rio Santa Barbara		13020101	Peralta	NMDGF	1	Disease	Fish Health Assessment	1	No pathogens detected downstream of RGCT pops.
2015	Lower Rio Grande		Rio Costilla		13020101	Timmons, Gatlin	NMDGF, Carson NF	2	Secure	Fish Barrier	1	Design work and compliance for terminal barrier.
2015	Pecos		South Fork Bonito Creek		13060008	Bakevich	NMDGF	2	Secure	Fish barrier	1	Design work for South Fork Bonito barrier.
2015	Lower Rio Grande		Casias Creek, Costilla Creek, tribs		13020101	Bakevich	NMDGF, TEI	3	Restore	Rotenone Reclamation	34	17 miles treated in July and again in August.
2015	Lower Rio Grande		Costilla Reservoir, tribs		13020101	Bakevich	NMDGF, TEI	3	Restore	Rotenone Reclamation	300	Treated 300 acre Costilla Reservoir and lower tribs.
2015	Lower Rio Grande		Allen Creek, Beaver Creek, Long Canyon, 7 Lakes		13020101	Bakevich	NMDGF	3	Restore	Restoration stocking	4	Stocked 10,000 pure RGCT into restored waters above Costilla Reservoir.
2015	Lower Rio Grande				13020101	Bakevich	NMDGF	3	Restore	Recreational stocking	12	Stocked 370,000 into recreational RGCT waters.
2015	Pecos				13020101	D'Alessandro	NMDGF	3	Restore	Recreational stocking	1	Stocked 375 Pecos strain RGCT in Stewart Lake.
2015						Bakevich	NMDGF	5	Education	AFS technical talks and newsletter	3	Presented RGCT work in Portland and Flagstaff. Contributed to AFS chapter newsletter.
2015						Bakevich	NMDGF	5	Education	Youth outreach	2	Assisted at tribal summer camp and RGCT in the classroom fish release.
2015						Bakevich	NMDGF	5	Education	Angler outreach	1	Presented to NM Trout angler group.
2015						Bakevich	NMDGF	7	Coordinate	Annual Meeting	1	Attended annual rangewide meeting.
2015						Bakevich	NMDGF	7	Coordinate	Summarized accomplishments in this form	1	
2015	Lower Rio Grande	13020102cp001	Nabor Creek		13020102	Bakevich	NMDGF	A	Miscellaneous	Wild spawn for broodstock	1	Spawned 13 pairs and delivered 3,588 eggs to 7 Springs.
2015	Pecos	13060001cp007	Jack's Creek		13060001	Bakevich	NMDGF	A	Miscellaneous	Wild spawn for recreational stocking	1	Spawned 8 pairs and took 918 eggs.
2015			7 Springs Hatchery			Bakevich	NMDGF	A	Miscellaneous	Hatchery spawn	1	Spawned ~600 pairs and took 604,000 eggs.

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2015						Patten	NMDGF	A	Miscellaneous	Statewide Management Plan draft	1	Developed statewide fisheries management plan.
United States Forest Service - Colorado												
2015	Rio Grande Headwaters		Little Squaw Creek	43377	13010001	Gomez	USFS/TU	1	Taxonomy	Tissue sample	1	Attempted to collect fin clips for DNA analysis from population of spawning RGCT observed in kettle lakes below Chief Mountain / Squaw Peak in 2014. Only 1 sample was collected, plans to return in 2016.
United States Forest Service - New Mexico												
2015	Lower Rio Grande	13020101cp019	Frijoles Creek		13020101	Gatlin	Carson NF	2	Secure	Non-native removal	2	Removed 16 Brown Trout and detected 329 RGCT.
2015	Caballo		Las Animas Creek		13030101	Monzingo, Cruse	Gila NF, TEI	7	Coordinate		1	Discussed invertebrate work, watershed recovery from wildfire.
2015	Lower Rio Grande	13020202cp001	Rio Cebolla		13020202	Rich	Santa Fe NF	2	Secure	Non-native removal	3	Removed 76 Brown Trout and detected 747 RGCT.
2015						Paroz, Rich, Gatlin, Myers	NF	7	Coordinate	Annual Meeting	1	Attended rangewide meeting.
United States Fish and Wildlife Service												
2015	Lower Rio Grande		Santa Clara Creek		13020101	Kitcheyan	FWS	7	Coordinate		2	Meetings with Santa Clara Pueblo-Office of Environmental Affairs to discuss future rehabilitation projects for the Santa Clara Creek Drainage due to the Los Conchas Fire.
2015	Lower Rio Grande		Santa Fe River			Kitcheyan	FWS	7	Coordinate		4	Meetings with Cochiti Pueblo Department of Natural Resources & Conservation to discuss future reintroduction efforts of Rio Grande cutthroat trout and stream restoration efforts on the Santa Fe River to support RGCT.
2015	Lower Rio Grande		Rio Lucero & Rio Pueblo de Taos			Kitcheyan	FWS	7	Coordinate		4	Development of a cooperative agreement with the Taos Pueblo Game & Fish Program to inventory barriers in two major watersheds on the Pueblo.

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2015	Lower Rio Grande		Rio Grande			James, Kitcheyan, Austring	FWS	5	Education		20	4th Annual Native Fish in the Classroom - "Releasing the Natives Field Day"; 54 students (Emerson and Monte Vista Elementary schools participated in this event); six 4th grade classes (2 = Monte Vista Elementary, and 4 = Emerson Elementary) participated.
2015	Lower Rio Grande					Kitcheyan, Dean	FWS	5	Education		1	Eight Northern Pueblos Tribal Youth Environmental Summer Camp; approximately 32 Native American students (High School and College level) participated in this event). Five stations setup which allowed to students hands-on participation and instructors discussed a range of topics that included water quality, stream habitat, aquatic benthos, electrofishing, and wildlife management.
2015						Kitcheyan	FWS	6	Database	Annual database entry	1	
2015						Kitcheyan	FWS	7	Coordinate	NM RGCT Working Group meeting	1	
2015						Kitcheyan, Mata	FWS	7	Coordinate	Rangewide meeting	1	
2015						Kitcheyan	FWS	7	Coordinate	Filled out this form	1	
2015						Mata	FWS	7	Coordinate	Participate in Rio Costilla Project	1	
Bureau of Land Management - Colorado												
Bureau of Land Management-New Mexico												
2015	Lower Rio Grande		Rio Grande Upper box/Red River confluence			Ryan Besser	BLM/NMDGF /USFS	3	Augment	RGCT stocking	1	Stocking: recreational, not into pure population.
2015	Lower Rio Grande		Red River Below Hatchery			Besser, Frey, Hansen, Dunn	BLM/NMDGF	1	Survey	3 pass depletion survey	1	No Oncorhynchus clarki virginalis detected. Salmo trutta and Oncorhynchus mykiss detected.

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Year	GMU	Population Code	Water	Water Code	HUC	Biologist	Agency	Strategy	Subhead	Activity	Units Accomplished	Comments
2015	Lower Rio Grande		Rio Embudo-Lower site			Besser, Hansen, Green, Dunn, Dalessandro	BLM/NMDGF	1	Survey	3 pass depletion survey	1	No Oncorhynchus clarki virginalis detected. 4 Oncorhynchus clarkii x.(hybrid) and Salmo trutta and Oncorhynchus mykiss detected.
2015	Lower Rio Grande		Rio San Antonio			Besser, Hansen, Green, Dunn, Dalessandro	BLM/NMDGF	1	Survey	3 pass depletion survey	1	No Oncorhynchus clarki virginalis detected. Salmo trutta detected.
2015	Lower Rio Grande		Santa Cruz River			Besser, Hansen, Green, Dunn, Dalessandro	BLM/NMDGF	1	Survey	3 pass depletion survey	1	No Oncorhynchus clarki virginalis detected. Salmo trutta detected.
2015						Besser	BLM	7	Coordinate	Attended range-wide meeting	1	
National Parks Service - Colorado												
2015	Rio Grande Headwaters	13010003cd019	Upper Sand Creek Lake	81163	13010003	Terry, Todd	NPS	1	Taxonomy	AFLP Analysis	1	95% RGCT, 4% YSCT, 1% CRCT.
2015	Rio Grande Headwaters	13010003cd020	Lower Sand Creek Lake	81151	13010003	Terry, Todd	NPS	1	Taxonomy	AFLP Analysis	1	93% YSCT, 3% RGCT, 3% CRCT .
2015	Rio Grande Headwaters		Sand Creek	42856	13010003	Terry, Todd	NPS	1	Survey	Electrofishing, eDNA, visual observation for fish presence/absence	22	Mapped fish distribution in Sand Creek drainage.
2015	Rio Grande Headwaters		Sand Creek	42856	13010003	Terry, Todd	NPS	1	Habitat Inventory	Temperature study, Macroinvertebrate monitoring	22	Collected Macroinvertebrate data and seasonal temperature data in Sand Creek drainage.
National Parks Service - New Mexico												
2015						Sweat	NPS	7	Coordinate	Attended rangewide meeting	1	
Taos Pueblo												
Jicarilla Apache Nation												
2015						Mazzone	JAN	7	Coordinate	Attended rangewide meeting	1	
Mescalero Apache Tribe												