Colorado Department of Natural Resources

Species Conservation Trust Fund

FY 2017-18 Annual Report to the General Assembly

Species Conservation Trust Fund

The Colorado General Assembly created the Species Conservation Trust Fund (SCTF) in 1998 through the passage of HB 98-1006. This legislation provides ongoing funding to implement cooperative agreements, recovery programs, and other programs designed to meet Colorado's obligations under the Endangered Species Act (ESA). The SCTF is also intended to promote practices designed to conserve species currently listed as threatened or endangered under state law, recover or protect candidate species in order to avoid the need to list those species under the state or federal ESA, and improve the scientific understanding governing federal or state species listing and delisting.

Statute (24-33-111 (3), C.R.S.) directs the Executive Director of the Colorado Department of Natural Resources (DNR) to report to the General Assembly on the progress and status of activities undertaken to conserve and recover Colorado's native species. This report covers activity in FY 2016-17 and FY 2017-18 and includes a summary of appropriations, select outcomes, and a full list of project accomplishments that have occurred during these years.

Summary of SCTF FY 2016-17 and FY 2017-18 Appropriations

Each year, the Executive Director of the Department of Natural Resources (DNR) prepares a species conservation eligibility list (SCEL) after consultation with the Colorado Water Conservation Board (CWCB) and its Director, and the Colorado Parks and Wildlife (CPW) Commission and its Director. The SCEL identifies programs (and associated costs) that are eligible for funding from the SCTF. Once finalized with the Board and the Commission, the SCEL is sent to the General Assembly for review and modifications as appropriate prior to the passage of the annual SCTF bill.

In FY 2016-17 and FY 2017-18, CPW was appropriated $3.725 million and CWCB was appropriated $3.125 million for programs or projects. These funds were appropriated under House Bill 16-1458 and Senate Bill 17-202. The funding appropriated to CPW has been allocated to research and habitat improvements for numerous species including: prairie dogs, greater and Gunnison sage-grouse, a variety of native fish species, sharp-tailed grouse, lesser prairie chicken, white-tailed ptarmigan, a variety of reptiles, Canadian lynx, bats, boreal toad, black-footed ferret and the New Mexico Jumping Mouse. CWCB's funding has been allocated to endangered species programs related to the Platte River Recovery Implementation Program, the Upper Colorado River Recovery Implementation Program, selenium management, and related projects.

Selected Project Outcomes

Since its inception, the SCTF has funded a wide array of important conservation projects. The following highlights some of the key accomplishments for FY 2016-17 and FY 2017-18, and the following table provides a more comprehensive picture of outcomes from SCTF projects during that period.

- Facilitated progress on the Platte River Recovery Implementation Plan (PRRIP), including efforts that have helped provide habitat benefits for three threatened and endangered bird species and one fish. The whooping crane – a focal species of the Program – had a 31% higher population count in 2016-17 compared to the previous year in a recent survey.
- Helped provide expedited Section 7 ESA consultations through the PRRIP for North Platte and South Platte River water users in the state for a total of 147 projects since 2007.
- Through the Upper Colorado Recovery Implementation Program (UCRIP), facilitated increased flows through critical endangered fish habitat in late summer of 2017, including voluntary reservoir operations to bypass more than 37,000 acre feet of water to augment the spring peak in the critical endangered fish habitat on the Colorado River known as the 15-Mile Reach. UCRIP helped provide expedited Section 7 ESA consultations for Colorado River water users in the state for a total of 1232 projects since 1988.
- Treated at least 2,000 acres of occupied Gunnison's prairie dog habitat annually & demonstrated colony persistence & growth in treated areas.
- Provided vital baseline data on bat species that do not use caves or mines for habitat, prior to expected spread of White-nose Syndrome to Colorado and better inform the decision-making process.
- Continued to purchase approximately 1,000 lbs of contract-grown forb seed to support the development of additional plant species
- Offered voluntary, incentive based conservation projects to private landowners to enhance habitat for lesser prairie-chickens and other grassland birds in Southeast Colorado.
- Performed surveys, monitoring, and research for federally listed or potentially listed plant species to inform federal listing decisions. Most recently, rare plant work has focused on Plant Species of Greatest Conservation Need outlined in the State Wildlife Action Plan.
- Continued to restore cutthroat trout to as many miles of historic habitat as can be accomplished to avert a federal listing under the ESA.

Species Conservation Trust Fund - Individual Projects in Progress Colorado Parks & Wildlife FY16-17 and FY17-18					
Project	**Purpose**	**Outcomes**	**Year(s) Authorized**	**Total Appropriated**	**Notes**
Native Terrestrial Wildlife Conservation					
Native Seed Production for Sagebrush Habitat Restoration	CPW has constructed a seed warehouse facility in Delta to increase the use of native and locally adapted seeds in wildlife habitat restoration projects on CPW, BLM, USFS and private lands.	We will continue to purchase approximately 1,000 lbs of contract-grown forb seed and continue our support for the development of additional plant species by the UP Plant Program for use in restoration work. Our focus is shifting from production to planting the new species we have brought to market. With the addition of new Mule Deer Strategy projects, we are not meeting the demand for the new forb seed. However, federal partners are stepping up to support increased seed production. In the coming FY we anticipate applying the new species on approximate 1-2,000 acres per year.	16-17	$100,000	On-going program from FY 09-10- total appropriated thru FY 17-18 $1,300,000
Bat White-Nose Syndrome Surveillance and Response	To develop important baseline information on native bat species, a vital foundation for later efforts to develop an effective conservation plan, protect important habitat, and assess the impact of management efforts.	The proposed project will provide vital baseline occupancy rates for bat species that do not use caves or mines for hibernacula. The results, findings and new techniques developed through the projects will benefit native bat species by providing vital baseline information, prior to the expected spread of White-nose Syndrome to Colorado, and better inform the decision-making process related to these species.	16-17	$60,000	On-going program from FY 11-12- total appropriated thru FY 17-18 $300,000

Black-footed Ferret Monitoring	To improve and monitor the success of Black-footed Ferret reintroductions on private lands in Colorado, through plague management and surveys	The proposed project will collect data on the success of current and future ferret populations in Colorado, manage plague at release sites through dusting and/or SPV deployment, and identify more efficient survey methodologies	16-17 17-18	$200,000	On-going program from FY 15-16- total appropriated thru FY 17-18 $360,000
Plague Management-Soapstone Black-footed Ferret	To explore cost-effective approaches for preventively managing plague in black-tailed prairie dog colonies to support black-footed ferret reintroduction.	Treat at least 2,000 acres* of occupied prairie dog habitat annually & demonstrate colony persistence & growth in treated areas, as well as sustained black-footed ferret persistence. *(Provided accessible, occupied acres available for treatment.) Some sites also used for field experimentation to assess alternative oral vaccination approaches.	16-17 17-18	$225,000	On-going program from FY 15-16- total appropriated thru FY 17-18 $325,000
Raptor Database Evaluation	To review and update the statewide raptor nest database, develop models of raptor distribution and demography using the database, and develop recommendations for future raptor monitoring protocols.	At least one peer-reviewed scientific publication, and a report with recommendations for future raptor monitoring protocols for CPW and its partners.	16-17	$40,000	On-going program from FY 15-16- total appropriated thru FY 17-18 $90,000
Oral Plague Vaccine for Black-footed Ferret	To examine apparent safety and potential efficacy of oral vaccines to prevent plague in reintroduced black-footed ferrets.	Test and compare available candidate oral vaccines in captive black-footed ferrets.	16-17 17-18	$110,000	On-going program from FY 15-16- total appropriated thru FY 17-18 $204,000
Plague Management Gunnison's Prairie Dog	To fund ongoing work to adaptively monitor and preventively manage plague on a landscape level via annual dusting of Gunnison's prairie dog colonies.	Treat at least 2,000 acres of occupied Gunnison's prairie dog habitat annually & demonstrate colony persistence & growth in treated areas.	16-17 17-18	$250,000	On-going program from FY 14-15 total appropriated thru FY 17-18 $500,000

Lesser Prairie Chicken Habitat Improvement	This project offers voluntary, incentive based conservation projects to private landowners to enhance habitat for lesser prairie-chickens and other grassland birds in Southeast Colorado	Funds are fully encumbered in our LPCHIP/PHIP habitat contract and project solicitation is occurring. Federal farm bill programs that this program seeks to leverage have been on standstill awaiting a new farm bill and increased acreage cap within CRP. In light of uncertainty regarding the farm bill, CPW and partners are moving forward with state-only funded options under LPCHIP. Projects are in the landowner solicitation phase and will be implemented as soon as possible. Program specifications have been updated and training has been provided to partners involved in delivery of the program.	16-17	$150,000	
Columbian Sharp-tailed Grouse Habitat Treatments	To provide matching funds to complete habitat treatments in support of a project on Columbian sharp-tailed grouse demography and response to habitat treatments (SCTF9CST).	Habitat treatments completed for research project.	17-18	$75,000	
Eastern Colorado grassland bird diverse seeding mixes	This project seeks to diversify and enhance restored grassland habitat in Eastern Colorado to benefit grassland birds.	Approximately 4,200 acres of projects are in the planting or planning stages. 3200 acres of diverse plantings are being planted currently (April 2018) and payments will be processed once the acres are planted and documented. These acres are delivered on a seed re-imbursement basis and leverage federal farm bill funds. Payments will be processed after planting and certification of seed mixes, these funds (~$64,000) will be expended in the next couple of months. Seed has been purchased for an additional 810 acres of playa buffers that are in the planting or planning stages. These projects will total approximately 1,000 acres by the end of the spring 2019 planting season at a seeding cost of $19,875 that has been	17-18	$230,000	

		expended in spring 2018. Remaining funds are being targeted at leveraging farm bill acres upon completion of the new farm bill-see detail in the changes in scope of project/timeline section.			
Native Aquatic Wildlife Conservation					
Development of Plains Fish Monitoring Protocols	To evaluate and test the validity of more efficient sampling methods for locating populations of native eastern plains fish populations.	Several hundred sites have been sampled. Multiple reports have been completed, including a master's thesis (Groce, M. C. 2011. Evaluating the success of Arkansas darter translocations in southeastern Colorado. Colorado State University, Fort Collins, CO), two peer-reviewed publications (Groce, M. C., L. L. Bailey and K. D. Fausch. 2012. Evaluating the success of Arkansas darter translocations in Colorado: An occupancy sampling approach. Transactions of the American Fisheries Society 141:825-840. Broms, K. M., M. B. Hooten and R. M. Fitzpatrick. 2014. Accounting for imperfect detection in Hill numbers for biodiversity studies. Methods in Ecology and Evolution 6:99-108).	FY 17-18	$125,000	

Three Species Genetics and Inventory in Northwestern Colorado	To evaluate feasibility of restoring native sucker and chub populations through supplementation or re-establishment, using hatchery-reared fish. To avert federal listing of three species (bluehead sucker, flannelmouth sucker, roundtail chub) under the ESA.	Evaluating genetic variability of sucker species has been conducted in coordination with project SCTF001C, to determine number and sources of broodstocks necessary for reintroduction and/or augmentation of existing populations. Evaluation of roundtail chub genetic variability is well underway. Hatchery-reared bluehead suckers are being stocked into several streams on a multi-year basis. Work continues on developing hatchery culture techniques for flannelmouth sucker. Stocked fish in study streams are PIT tagged, and extensively tracked post-release using portable and fixed antennas, to monitor survival and movement	17-18	$42,000	On-going program from FY 09-10 total appropriated thru FY 17-18 $552,000
Cutthroat Trout Stream Habitat/Population Reclamation	To restore native cutthroat trout populations primarily through the construction of in-stream barriers to isolate and protect cutthroat trout from invasion by trout from downstream sources, and chemical reclamation projects to remove nonnative trout populations.	Restore cutthroat trout to as many miles of historic habitat as can be accomplished; complete at least one project per year; avert federal listing of native cutthroat trout under the ESA.	17-18	$150,000	On-going program from FY 09-10 total appropriated thru FY 17-18 $940,000

Boreal Toad Reintroduction Site Identification	To identify candidate locations suitable for boreal toad reintroduction.	CPW surveyed sites for boreal toads, and collected eDNA samples. Sites included known breeding ponds, and sites without observed toads where occupancy modeling predicted presence. An eDNA assay was developed and shown to be reliable by ground-truthing using the known-occupied sites. Three years' of sample collection and analysis have been completed, and a manuscript is in preparation comparing eDNA detection efficacy with that of visual encounter surveys. The conclusions of this manuscript and related reports will direct follow-up field work to continue to refine and evaluate eDNA survey methods.	17-18	$149,150	On-going program from FY 13-14 total appropriated thru FY 17-18 $437,150
Flood-Related Species Redistribution	To determine the effects of the September 2013 floods on distribution and abundance of special status plains fish species, through extensive surveys throughout the plains portion of the South Platte Basin, and an intensive study of longitudinal fish distribution and movement in the St. Vrain River. Findings will inform stream restoration efforts, fish passage design for diversion structures, and prioritization of restoration efforts.	The St. Vrain study is complete and a M.S. thesis is in preparation. Fish surveys through the rest of the South Platte Basin continue and have documented upstream range expansion of two native fish species, and documented a species believed to be native but previously unconfirmed in Colorado. Data generated from this work are already being used to prioritize habitat restoration and fish passage at diversion structures.	16-17	$80,000	On-going program from FY 14-15 total appropriated thru FY 17-18 $220,000
Native Cutthroat Trout Genetics	Use a variety of modern molecular methods to inform management of native cutthroat trout in Colorado by evaluating lineage, purity and heritage of untested native cutthroat trout populations.	Samples from 54 populations were analyzed with up to six different genetic tests. Eighteen populations harbored pure native cutthroat trout, including the rediscovery of the extinct native trout of the San Juan basin and a Westslope Cutthroat Trout population	16-17 17-18	$45,000	On-going program from FY 14-15 total appropriated thru FY 17-18 $85,000

Native Salmonid Spawn & Culture	Develop improved procedures for acquiring native Salmonid eggs from wild sources	Refined methods for extending milt, disinfecting eggs, and tagging adult Cutthroat Trout to assist with maximizing genetic diversity in progeny (spawn matrixing)	16-17 17-18	$56,015	On-going program from FY 15-16 total appropriated thru FY 17-18 $81,015
Hatchery Environment Enhancement	To evaluate the effects of hatchery environment enhancement, including cover, flow, and diurnal changes in temperature on the ability of Arkansas darters to avoid an esocid predator.	The goal of this study is to determine if hatchery environment enhancement can better prepare Arkansas darters for the conditions they will encounter after being stocked as well as increase their post-stocking survival through predator evasion. The enhancement strategies that increase predator evasion of Arkansas darters in the lab will be implemented and tested on a larger scale at the CPW Native Aquatic Species Restoration Facility.	16-17	$46,000	On-going program from FY 15-16 total appropriated thru FY 17-18 $172,500
Roaring Judy Isolation Building	The current demand for isolation space exceeds the supply within the CPW hatchery section. The recent patterns of drought, fire, and flood conditions in Colorado have magnified the importance of having adequate isolation space. Construction of a new isolation building at the Roaring Judy Hatchery would provide much needed space for both the protection and propagation of coldwater fish species of concern in Colorado.	Construction of a permanent 28ft x 26ft isolation facility will double the amount of isolation space at Roaring Judy. The structure will be divided into two separate rooms allowing hatchery staff to simultaneously raise or hold two separate lots of fish.	17-18	$124,000	

Boreal toad Bd resistance & genetics	To characterize genetics within individual toad populations exhibiting a range of survival rates, in conjunction with Bd status, in hopes of identifying a genetic association with Bd-tolerance. To determine relatedness of wild toads across the Colorado portion of the range, in order to improve broodstock efficiency and robustness of hatchery broodstocks.	DNA was collected from 50 toads in the captive broodstock at CPW's Native Aquatic Species Restoration Facility in fall 2017, and these samples used to validate DNA amplification techniques. Extensive planning completed to identify field sites, assemble field data collection kits and distribute them to biologists.	16-17 17-18	$249,850	
Boreal toad habitat construction	Increase BOR breeding sites within historic habitat by constructing up to 4 ponds on RGNF land near Creede. Repatriate by stocking tadpoles and monitor Bd status over 4 years.	In collaboration with partners, construct 4 ponds designed to maximize BOR breeding habitat. Monitor Bd status and survival of stocked tadpoles.	17-18	$70,000	
Effects of food web toxicants on native fish	Dietary exposure of toxicants is rarely considered in risk assessment and water quality standards. Algae readily accumulates toxicants and is a major food source for many threatened and endangered fish. Effects of toxicants on algae and accumulation rates are rarely if ever studied. This study aims to evaluate the effects of toxicants on algivorous threatened and endangered species by direct accumulation of toxicants through the food web and indirect loss of food sources.	This project has 2 major goals. Goal one will evaluate the susceptibility of threatened and endangered fish and amphibian food sources to toxicants by exposing algal species to agrochemicals, pharmaceuticals, pesticides or metals. Use of pulse amplitude modulated fluorimetry has been developed to examine colonization, growth and physiological health of important food species. The second goal examines risk of toxicants to endangered and threatened fish species through dietary exposure. Algal susceptibility is under represented in the scientific literature that is considered in creating water quality standards. These results will inform pollution policy. Dietary exposure of fish to toxicants will add	17-18	$78,000	

		environmental realism to experiments and thus ensure water quality standards are protective of fish. Understanding the importance of algae food sources for threatened and endangered species will help fish and water managers make decisions regarding water quality, quantity and timing.			
Native Fish Passage in Front Range Transition Zone Stream	This study has two primary goals: 1) to evaluate the effectiveness of fish passage structures installed following the 2013 Front Range floods for developing operational guidelines and inform future fish passage designs and 2) to monitor fish entrainment in irrigation ditches to assess the need for fish screens. This research will provide valuable information for the conservation and management of native fish populations with implications for the entire Colorado Front Range transition zone region.	This study will provide valuable insights for optimizing design of existing and future fish passage structures and ultimately how to improve management of imperiled native fish populations on the Colorado Front Range. Specifically, this study will evaluate the relative importance of limiting factors (i.e., longitudinal connectivity and entrainment) on native fish populations.	17-18	$149,000	
Western Slope Native Species Protection	Triploid sport fish such as triploid walleye which do not establish self-sustaining populations have the potential to (1) provide a suitable cool/warm water reservoir sport fishing opportunity desired by anglers on the western slope of Colorado, and (2) limit existing diploid walleye populations through reproductive interference thereby aiding in	This study has two key components aimed at evaluating the juvenile life stages and adult life stages of triploid walleye: (1) a paired stocking experiment conducted for two consecutive years in two separate reservoirs to assess the relative growth and survival of diploid versus triploid fry and fingerlings, and (2) a field assessment of an existing sympatric population of adult diploid and triploid walleye in Narraguinnep Reservoir to assess relative feeding, growth, survival, gonad	17-18	$150,000	

	ongoing conservation efforts for native fish endemic to the Colorado River Basin. Developing innocuous non-salmonid sport fishing opportunities may also help reconcile ongoing conflict between the desire for warm water sport fishing by anglers and native fish conservation on the western slope. The purpose of this work is to evaluate the performance (e.g., feeding, growth, survival, gonad development, spawning behavior) of triploid walleye stocked into systems with diploid walleye to inform their suitability for (1) and (2) listed above and inform ongoing stocking efforts to establish triploid walleye fisheries in Colorado.	development, and spawning behavior by adult triploid walleye.			
CPW TOTAL				**$2,954,015**	

Note: This table reflects FY 2016-17 and FY 2017-18 funding for specific SCTF projects. In FY 16-17, CPW was also appropriated $700,000 to fund native species management, monitoring and propagation. This funding is not for specific projects, and instead supplements species conservation work done by CPW across a variety of programs and projects. Further, this table does not indicate a small subset of projects (approx. $70,000) that are on hold for a variety of factors, such as waiting on outside approvals.

Species Conservation Trust Fund – Programs and Projects In Progress
Colorado Water Conservation Board
FY16-17 and FY17-18

Project	Purpose	Outcomes	Year(s) Authorized	Total Appropriated
Platte River Recovery Implementation Program (PRRIP)	To provide Colorado's monetary contribution to PRRIP operations and to operate the Tamarack project and similar water re-timing projects in accordance with Colorado's obligations to PRRIP. The goal of the PRRIP is to enhance, restore, and protect habitat for the whooping crane, interior least tern, piping plover, and pallid sturgeon. The existence of PRRIP allows water use and development to continue in the Front Range and throughout northern Colorado.	Colorado water users on the South Platte and North Platte have benefited from 147 expedited ESA Section 7 consultations since the inception of PRRIP in 2007. Six of these consultations were completed in 2017. Colorado meets its water-specific obligations to PRRIP through operation of the Tamarack project and similar groundwater recharge projects on the Lower South Platte River near the state line. Tamarack retimes an average of 8,022 acre-feet of water per year. Adjusting for hydrologic conditions, operation of Tamarack satisfies Colorado's commitment to reduce target flow shortages by 10,000 acre feet per year. Recovery efforts for the species are proceeding well in the case of the interior least tern, which the U.S. Fish and Wildlife Service has suggested delisting in a recent 5-Year Review. The whooping crane is also faring well: the population was estimated to be 431 in winter 2016-17, a 31% increase over the count of 329 individuals the prior year.	17-18	$875,000
Upper Colorado Recovery Implementation Program (UCRIP)	Four endangered fish species—the humpback chub, razorback sucker, Colorado pikeminnow, and bonytail—are found in the Upper Colorado River Basin. CWCB actively participates in the Upper Colorado River Endangered Fish Recovery Program to support recovery of these species. In addition to benefiting species,	Since 1988, UCRIP has provided Colorado water users with expedited ESA Section 7 Consultations for 1,232 projects for an estimated 2.12 million acre-feet of existing and future depletions. In 2017, reservoir operators voluntarily coordinated the bypass of more than 37,000	16-17 17-18	$1,500,000

	the recovery program allows Colorado to maximize beneficial use of its compact apportionments while complying with the ESA. Recent authorizations have focused on non-native fish removal efforts. Interactions between native and non-native fish interactions increasingly threaten the success associated with the recovery of four endangered fish species within the Upper Colorado River Basin. SCTF funds were identified for projects targeting several backwater areas and stream reaches where non-native fish populations have recently increased and where non-native fish have been illicitly stocked. Additionally, Colorado has committed to helping pay for installation of a screen at Ridgway Reservoir to decrease escapement of illicitly stocked non-native fish into the Uncompahgre River below the dam.	AF of water to augment the spring peak in the 15-Mile Reach. Over 77,000 AF was released from reservoirs during the summer low-flow period, improving local streamflow conditions downstream, increasing water available for hydropower production at the Grant Valley Powerplant, and ultimately increasing streamflows in the 15 Mile Reach. This included a 6,000 AF lease funded by SCTF between the CWCB and Ute Water Conservancy District for release of water from Ruedi Reservoir. SCTF-funded nonnative fish removal efforts were conducted at Ridgway and Elkhead reservoirs to reduce nonnative populations and therefore reduce risk of escapement, predation and competition with native fish downstream. Performance of the net at Elkhead is being monitored to help with feasibility and design work for a net at Ridgway Reservoir. CWCB and the Recovery Program have begun a study of a possible White River Management Plan to assist with ESA protection for water users in that river basin, similar to work completed for other west slope basins.		
Grand Valley Power Plant Repair and Improvement	The Grand Valley Power Plant was constructed in 1933 by Xcel Energy and was recently acquired by the Orchard Mesa Irrigation District (OMID) and Grand Valley Water User Association (GVWUA). Agreements with the acquiring entities have allowed water to be delivered to the power plant and returned to the river to increase flows in the 15 Mile Reach to benefit habitat for endangered fish species. The aging power plant required repairs and updates to operate reliably in order to continue to provide water to the	Design for the Grand Valley Power Plant repairs began. Reclamation's Technical Services Center continues working on the design.	16-17	$400,000

	15 Mile Reach for the benefit of the endangered fish that use the 15 Mile Reach as habitat. To improve the efficiency and reliability of the power plant, the following repairs and updates will be performed: update of intake structure, refurbishment of turbines, disassembling and rewinding of generators, updates of the electrical system, controls, switchgear and substation, and lowering of the tailrace. These funds will provide approximately 10% of the total costs of repairs, and the other funds will come from OMID, GVWUA, and some additional sources.			
Gunnison River Basin Selenium Management Program	The Gunnison Basin Selenium Management Program (SMP) is a required conservation measure identified in the Programmatic Biological Opinion (PBO, issued by USFWS Dec. 4, 2009) as part of the Aspinall Unit Final Environmental Impact Statement (2012). The SMP aims to improve fish habitat by reducing selenium loading from irrigation runoff in the Gunnison Basin. By meeting the targets set in the SMP, basin water users maintain ESA compliance and have regulatory certainty in continuing historical water uses. SCTF funding was identified for selenium monitoring of both water, sediment, and fish tissue; updating of statistical models to identify selenium loading sources; and evaluation of selenium reduction methods such as further lining of canals and piping of laterals.	Expenditures include the completion of a Selenium Science Plan that describes and identifies gaps in monitoring and research efforts to more fully understand selenium occurrence and the efforts to mitigate selenium in the Lower Gunnison Basin. SCTF funding also continues to support a real-time surface and groundwater quality monitoring network, investigation of selenium loading, research of best management practice effectiveness, and support for local conservation district staff. Analysis indicates a continuing downward trend in dissolved selenium at the Gunnison River near Grand Junction.	16-17 17-18	$350,000
CWCB TOTAL				**$3,125,000**