

Conservation Assessment and Strategy for the California Golden Trout (*Oncorhynchus mykiss aguabonita*)
Table 3 - Summary of Management Tasks and Estimated Costs, revised April 10, 2013.

Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Cost Estimates (\$1,000)					
						Total Estimated Cost	2010	2011	2012	2013	2014
GOAL 1: Protect and restore California golden trout genetic integrity and distribution in its native range											
<i>Objective 1.1 Identify and monitor extant California golden trout populations.</i>											
1	1.1a	Capture and summarize trout stocking records from CDFW R6 Bishop offices.		CDFW	Ongoing	1		1			
1	1.1b	Collect trout fins for genetic analysis.	Annually as needed	CDFW	Ongoing	2.5		1	.5	.5	.5
1	1.1c	Conduct baseline DNA analysis of trout within the SFKR and GTC basins.	2001-2007	CDFW USFWS	Completed in 2007						
1	1.1d	Monitor hybridization and introgression levels in California golden trout populations within the SFKR and GTC basins.	At 10-year intervals	CDFW USFWS	Sampling in 2005-06, analysis pending funding	20 120					
1	1.1e	Conduct DNA analysis of suspected California golden trout populations outside their native range.	Beginning in 2010	CDFW	Ongoing	113	3	55			
3	1.1f	Collect information on the location of archived GT-C museum specimens	1 year	CDFW	Begin 2011	2					
<i>Objective 1.2 Maintain and improve the genetic integrity, population structure and ecosystem elements of California golden trout.</i>											
Management actions based on the current understanding of golden trout genetics											
1	1.2a	Develop and implement a genetics management plan.	2 years to develop	CDFW USFWS	Begin 2010	23.5 50.5	.5 50.5	20	1		1

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
1	1.2a.1	Review Genetics Management Plan and incorporate ideas into Conservation Strategy	1	CDFW INF	Ongoing	2 2				2 2	
1	1.2b	Maintain fishless condition of headwater lakes in GTC watershed.	Verify every 5 years	CDFW INF	Completed, need to verify & monitor	26 2		1	13.2	5 4.5	
3	1.2c	Reduce trout numbers in selected stream reaches within GTC watershed.	2 years	CDFW INF	Completed	42 8					
1	1.2d	Prepare written plans for integration of GTC population and habitat protection into INF and SQF fire pre-suppression planning.	Complete 2006	INF SQF	Complete 2006						
1	1.2d.1	Amend fire management plans to integrate prevention of introduced aquatic pest species and diseases.		INF	When needed	0.5			0.5		
1	1.2d.2	Implement 1.2d on an annual basis as needed.	Annual	CDFW INF SQF	Ongoing	9.5 10 1.175	0.5	0.5 0.5 0.125	.5 .5 0.5	0.5 0.5 0.125	0.5 0.5 0.125
2	1.2e	Eliminate fish from targeted waters if warranted per the genetics management plan. Review NEPA, start EIS	3 years	CDFW INF	Begin NEPA in 2012	178 26				2	
Fish population monitoring											
2	1.2f	Establish additional locations for fish population monitoring and coordinate with INF and SQF stream habitat monitoring.	10 years	CDFW INF	Ongoing	2.5 1.25	0.5 0.25	0.5 0.25	0.5 0.25	1 0.25	0.5 0.25
2	1.2g	Conduct 1-3 fish population estimates per year at the established monitoring sites.	Annual	CDFW INF	Ongoing	75 2.5	15 0.5			15 2	15 0.5
Refuges for California Golden Trout Populations											
1		Establish criteria for identifying refuges for California golden trout.	2 years	CDFW INF SQF	Ongoing	3 0.375 0.375				1 0.125 0.125	1 0.125 0.125
1	1.2i	Investigate locations for refuges within the California golden trout native range.	4 years	CDFW	Ongoing	3			1	1	1

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
1	1.2j	Investigate locations for refuges outside of the species' native range.	4 years	CDFW	Ongoing	6					
1	1.2k	Establish refuges for California golden trout based on best available science.	2 years	CDFW INF	Pending	3 2					3 2
Management actions for controlling upstream movement of non-native trout											
1	1.2l	Monitor the integrity of SFKR Barriers. (piping, cracks)	Annual	CDFW	Ongoing	5	1	1	0.5	1	1
1	1.2m	Assess the hydrological effectiveness of Templeton and Schaeffer Barriers.	2 years	CDFW INF	Staff needed (Hydrologist)	5 5			0.5 0.1	4 4	
1	1.2n	Monitor the effectiveness of Templeton and Schaeffer Barriers at preventing fish passage.	Annual	CDFW INF	Ongoing	30 2.5	2 .5	7 .5	4 1	7 .5	7 .5
1	1.2o	Determine the current status and distribution of brown trout and reduce their numbers at the upstream extent of their distribution.	Annual	CDFW INF	Ongoing	23 1.25	3 .25	5 .25	5 .25	5 .25	5 .25
1	1.2p	Revegetate the access road and Schaeffer Barrier construction site.	1 year	CDFW INF	Completed						
1	1.2q	Evaluate the Strawberry Connection during runoff and map hydrologic flow patterns.	Monitor Annually	CDFW INF	Ongoing	.5 .5					0.25 0.25
1	1.2r	Modify the hydrologic connection between Templeton Meadow basin and Strawberry Creek.		CDFW INF	Completed				0.5		
1	1.2s	Remove all trout from upper Strawberry Creek and monitor movement of GTxRT hybrids in the area of the Strawberry Connection.	4 years	CDFW INF	Ongoing	54.5 5	9.5 1	9 1	6.2 2	9 1	9 1

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
2	1.2t	Revise the Kennedy Meadows catchable non-native trout stocking program.	5 years	CDFW	Completed	0.5		.25			
3	1.2u	Assess the need for an additional barrier downstream of the Schaeffer Barrier.	Unknown	CDFW INF SQF	Ongoing	63 12.5			3	2	
Objective 1.3 Strategic Program Management											
						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
1	1.3a	Conduct annual coordination meetings among the involved agencies; modify management tasks based on new genetic and habitat information; produce annual reports of expenditures, major findings, and accomplishments; and develop and secure the budget for the coming year	Annual	CDFW INF SQF USFWS	Ongoing	22.5	4.5	2.5	4.5	4.5	4.5
						5	1	1	0.5	1	1
						1.25	0.25	0.25	0.25	0.25	0.25
						5	1	1	1	1	1
1	1.3b	Review and update the Implementation Plan.	Annual	CDFW INF SQF	Ongoing	10	2	2	2	2	2
						5.0	1.0	0.3	0.3	1.0	1.0
						1.25	0.25	0.25	0.25	0.25	0.25
1	1.3c	Review of management direction: Managers from the cooperating agency to meet to review the progress of the recovery effort and status of the species. Determine if current direction is still appropriate.	one week	CDFW INF SQF USFWS		2					
						2					
						2					
						2					
Goal 2: Improve riparian and instream habitat for the restoration of GT-C populations											
Objective 2.1 Evaluate habitat restoration efforts and needs											
1	2.1a	Evaluate and document the success of past habitat restoration efforts.	Annual	INF	Complete	9.5 13	5.5 2	5			

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
1	2.1b	Evaluate opportunities for future watershed restoration efforts within SFKR and GTC watersheds.	Annual	CDFW INF SQF	Ongoing	2.5 15 0.5	0.5 3	0.5 3 0.125	0.5 1 0.125	0.5 3 0.125	0.5 1 0.125
1	2.1c	Monitor habitat changes in Templeton and Whitney allotments during 10 year grazing hiatus	Annual	INF	Ongoing	255	95	80	7.5	20	10
2	2.1d	Monitor the effectiveness of best management practices that could affect golden trout habitat	Annual	INF SQF	Ongoing	2 0.5		.5 0.125	.5 0.125	.5 0.125	.5 0.125
2	2.1e	Monitor stream water temperatures to document possible changes over time.	Annual	CDFW USFS	Ongoing	13 3		2	1.5	1 4	2
2	2.1f	Complete roads analysis in the SFKR watershed including CDFW property	5 years	CDFW INF	Completed Phase I - 2009	1 3			1 1	1	0.5
2	2.1g	Monitor Fish Creek habitat	Annual	SQF	Ongoing	.5		0.25	0.25	0.25	0.25
3	2.1h	Monitor and evaluate the effects of beaver to California golden trout within the SFKR and GTC.	Annual	CDFW INF	Ongoing as needed	2.5 0.75	0.5 .25	0.5 .25	0.5 .25		
3	2.1i	Assist CDFW Wildlife Management Division with completion of Monache Wildlife Area Management Plan	1 year	CDFW	To be completed	2		1	1		
Objective 2.2 Restore degraded habitats											
1	2.2a	Implement watershed restoration opportunities as appropriate	Annual	CDFW INF	Ongoing	5 400	1 230	1 40	3	2.2 30	1 30
1	2.2b	Consider habitat monitoring results in grazing allotment re-issuance	every 10 years for each allotment	INF	Ongoing	170		30	3	3	35
1	2.2c	Prevent water transfers from non-native water bodies into golden trout waters	Annual	CDFW INF SQF	Ongoing as needed	2 1 1		0.5 .25 .25	0.5 .25 .25	0.5 .25 .25	0.5 .25 .25

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
2	2.2d	Continue habitat improvement on CDFW Property in Monache Meadows	Annual	CDFW	Ongoing	30	15	6	4.3	4	3
2	2.2e	Investigate the acquisition of private property from willing sellers with the purpose of habitat improvement.	Initiate 2005	CDFW INF SQF	2 – 5 years	2 1 1		0.5 .25 .25	0.5 .25 .25	0.5 .25 .25	0.5 .25 .25
3	2.2f	Re-route access roads through INF into CFDG property outside the riparian zones.	2 - 3 years	CDFW INF	Assessment to begin in 2006	43 13					

Goal 3: Expand education efforts regarding California golden trout restoration and protection.

Objective 3.1 Expand public education about the California golden trout status and conservation needs

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
1	3.1a	Inform the public about proposed & planned management actions	Annual	CDFW INF SQF	Ongoing	2.5 22 0.625	0.5 0.5 0.125	0.5 20 0.125	0.5 0.5 0.125	0.5 0.5 0.125	0.5 0.5 0.125
1	3.1b	Conduct annual coordination meetings with stakeholders	Annual	CDFW INF SQF NGOs	Annual	25 10 2.5 15	5 2 0.5 3	5 2 0.5 3	2.5 0.5 0 3	5 2 0.5 3	5 2 0.5 3
1	3.1c	Produce an annual forest user's leaflet	Annual	CDFW INF SQF	Ongoing	2 2 .5		0.5 0.5 0.125	0.5 0.5 0.125	0.5 0.5 0.125	0.5 0.5 0.125
1	3.1d	Develop a golden trout web page and update annually.	Annual beginning in 2006	CDFW INF SQF NGOs	Ongoing	2.5 2.5 0.625 2.5	.5 0.5 0.125 0.5	.5 0.5 0.125 0.5	.5 0.5 0.125 0.5	1 0.125 0.5	.5 0.5 0.125 0.5
1	3.1e	Produce and distribute full-color California Golden Trout brochure	2 years	CDFW INF NGOs	Completed in 2004	1 1 10					
2	3.1f	Build additional educational kiosks on the California golden trout	2 years	CDFW SQF NGOs	Completed	.5 2		.25 1			

						Cost Estimates (\$1,000)					
Priority	Task No.	Task Description	Task Duration (years)	Lead Agency Cooperators	Status	Total Estimated Cost	2010	2011	2012	2013	2014
2	3.1g	Produce additional Kern Basin native trout distribution maps	1	CDFW INF SQF NGOs	Completed 2006						
Objective 3.2 Enforce State Fish and Game laws to protect California golden trout.											
1	3.2a	Work with Wildlife protection and USFS law enforcement personnel to enforce resource laws	Ongoing	CDFW	Ongoing						
1	3.2b	Ensure angling regulations are posted at key public access locations	Ongoing	CDFW	Ongoing, add locations	1.25	0.25	0.25		0.25	0.25

FUNDING SUMMARY Cost Estimates (\$1,000)

TOTAL	2010	2011	2012	2013	2014	TOTAL
CDFW	64.25	124	57.2	77.45	65.5	388.40
INF	341.75	181.05	24.15	79.125	90.075	716.15
SQF	1.25	2.75	2.25	2.875	2.5	11.63
USFWS	51.5	1	1	1	0	54.50
NGOs	3.5	4.5	3.5	3.5	3.5	18.50
Grand Total	462.25	313.3	88.1	163.95	161.575	1189.18

* Contingent on funding availability