Recovery Goal Factor	Management Action	FY-2003	FY-2004	FY-2005	FY-2006	FY-2007	FY-2008	FY-2009	FY-2010
Demographic Criteria	Get Broodstock HBC Into Captivity To Be Ready To Effectively Reproduce Fish	<-WB Genetics -><-----Produce Willow Beach HBC for research purposes---------> (P07) <---30 M Broodstock Genetics Eval (P09)---> <----------Procure Broodstock----------><----------Produce fish, if necessary----------> <--------Comprehensive Genetics Evaluation (P24)---------->							
	Expand Range of HBC Population To Other Grand Canyon Tributaries	<Eval Feas (P08)> of Augm of HBC <----------Translocate HBC above ---><----Monitor-----> Chute Falls (P11) <----------Bright Angel ?----------><-------Tapeats, Shinumo, Paria ?---------->							
Adequate Habitat and Range for Recovered Populations Provided	Install and Test TCD	<--Risk Assess-><-NEPA-><----------TCD Construction (P06)----------> <----------Implement Pre-TCD Monitoring----------><----------Implement TCD Evaluation/Monitoring---------->							
	Use Dam Operations To Disadvantage NNF And Assist Native Fish	<------Current Exp Flows (P13)-------> <-HBC lifest req-><---YOY habitat --><---Design/Implement Flows to Benefit HBC ----><--Design/Implement TCD/Flow Experiment----------> Experiment							
	Sediment Augmentation	<--------Evaluate Sed Augm (P19)------->							
	Manage Turbidity To Disadvantage NNF And Assist Native Fish	<---Feas Study----><----------Implement Turbidity Augmentation, if feasible----------> <--Turbidity Exp--> (P19)							
Protection from Overutilization for Scientific Pur. or Recreation	Evaluate Effects of Scientific Work on HBC	<----------Evaluate Threats to HBC from Scientific Work or Recreation (P14)---------->							

Adequate Protection from Diseases or Predation	Expand Non-Native Fish Control To Tributaries; Continue/Expand Mainstem Efforts	<--NEPA (NPS)-><-----Remove Brown Trout from Bright Angel Ck(P18)----> <-----Remove Brown Trout from mainstem near Bright Angel Ck?----------> (Part of normal electrofishing monitoring?) <----------Remove NNF from LCR (P01)----------> <----------Expand removal to other Grand Canyon tributaties?------> (Tapeats, Shinumo, Paria) <-Remove NNF near LCR (P12)----> <--Decision--> (Electrofishing) to Continue?							
	Control Invasive Species	<---Establish Baseline for Fish Below Dmnd Creek (P17)-><--------Monitor Invasion of NNF from Lake Mead below DC (P17)----------> <-------Develop Invasive Species Mgmt Plan (P21)---------->							
	Address Impacts of Parasites	<----Surveillance Parasites/Diseases (P10)---------> <----------Implement Control Strategies for Asian tapeworm, other parasites, as necessary---------->							
Adequate Existing Regulatory Mechanisms	Review LCR Watershed Mgmt	<--Review LCR Mgt Plan (P22)---><--Assist in Implementing Watershed Management Plan ---------->							
	Develop LCR/Mainstem Pop Estimate of HBC	<---------Joint LCR/Mainstem Pop Est (P15)----------> <----------Joint LCR/Mainstem Pop Est (P15)---------->							
	Outreach Program	<------Develop Outreach Prog (P16)--------><----------Implement Outreach Prog (P16)---------->							
	Develop Recovery Implementation Plan	<------Develop Recovery Agreements------><----------Implement Recovery Action Plan---------->							
Protection from Other Natural or Manmade Factors	Implement Toxic Spill Management Prevent at Cameron Bridge	<-Develop Response Plan (P02)-> <----------Implement Local Emergency Response Plan for Cameron Bridges----------> <-Develop LCR Pollution Control-> Plan (P03) <----------Implement Pollution Control Plan for LCR---------->							
Recovery Goal Factor	**Management Action**	**FY-2003**	**FY-2004**	**FY-2005**	**FY-2006**	**FY-2007**	**FY-2008**	**FY-2009**	**FY-2010**