

**San Juan River Population Model runs.
Fiscal Year 2016 Project Proposal**

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Background:

A modeling effort to construct a conceptual framework for the fish community and endangered fishes in the San Juan River began in 1998. This effort relates to Goal 4.3 of the Long Range Plan. These models have helped direct a focused field effort with the intent of using key site specific data to determine the carrying capacity of Colorado pikeminnow and razorback sucker in the river. A mechanistic population model has been constructed from the original conceptual model.

The San Juan River population model includes bioenergetics, population, and trophic components. Data for fish populations by age class and habitats as well as other trophic components are required as model parameters. The population model was demonstrated to the Biology Committee, Researchers and Peer Review Panel in May 2007. The model was updated in 2011 through 2013 with funding from the Southern Ute Indian Tribe to Stella Version 9 software. The model update is complete and capable of use for making model runs.

The Coordination Committee requested a Scope of Work for additional model runs that could not be completed during Biology Committee meetings. The FY2016 SOW program is to make model runs that can not be made during the normal Biology Committee meetings.

Objective:

Make model additional model runs as requested through the Program Office and approved by the Coordination Committee that incorporate the information from the monitoring data to evaluate SJRIP Program actions.

Methods:

Model simulations will be made to evaluate the change in population dynamics as a result of Program management actions or other activities that may affect recovery of Colorado pikeminnow and razorback sucker. Model simulations will be conducted for a maximum of 10 different simulations.

Schedule:

Model runs will be made as requested and after approval by the Coordination Committee on an as needed basis for FY2016.

Products:

A brief report will be prepared that documents the model runs. Summary tables of model simulations will be produced for each model run.

Budget FY-2016:

All funding for FY 2016 activities are requested from the recovery program. Total funding requested is shown in the following table.

Population Model Runs	Miller		ERI		total cost
	Staff days	Cost	Staff days	Cost	
Labor	8	\$6,840	2	\$2,560	\$9,400
Travel		\$-		\$-	\$-
Supplies (software updates etc)		\$-			\$-
Total cost		\$6,840		\$2,560	\$9,400