

Sequoia and Kings Canyon National Parks

National Park Service
U.S. Department of the Interior



Update: Restoration of Mountain Yellow-legged Frogs and Aquatic Ecosystems Within their Historic Range



MYLF adult



MYLF tadpoles



MYLF lake habitat

BACKGROUND

Mountain yellow-legged frogs (MYLFs; photos above) only occur in the high Sierra Nevada and the mountains of southern California. MYLFs now include two species, the newly described Sierra Nevada yellow-legged frog (*Rana sierrae*) and the Sierra Madre yellow-legged frog (*Rana muscosa*). MYLFs have disappeared from about 94% of historic sites in the Sierra Nevada and are candidates for listing as “endangered” under the federal Endangered Species Act. The existence of MYLFs is threatened by cumulative impacts from trout populations that were introduced to naturally fishless habitats, and by a new pathogen, chytrid fungus. MYLFs are declining rapidly and are in danger of becoming extinct. Both species occur in Sequoia and Kings Canyon National Parks (SEKI), which presents an opportunity to conserve amphibian diversity in one continuously managed landscape.

In 2001, SEKI was authorized to remove nonnative trout from 11 naturally fishless high lakes and streams to restore habitat for native species, with an emphasis on improving the status of imperiled MYLFs. To date SEKI has removed more than 23,000 trout, restored six lakes and is close to restoring five additional lakes. MYLF tadpole and frog densities measured in 2001 and 2007 in the six restored lakes showed average increases of 19-fold and 16-fold (Figure 1), with one lake showing a 60-fold increase. The biomass recovery in these lakes has attracted native predators such as snakes, birds and mammals, which have been observed preying on now-abundant frogs, tadpoles and aquatic invertebrates.

Due to this success, SEKI is proposing to restore additional lakes and streams, and conducted public scoping from January to February 2007. Comments were received from 35 individuals or groups, and results showed broad public support for additional ecosystem restoration (Table 1). The public was divided on the issue of chemical use for restoration, however, with comments expressing both opposition and support.

Although chytrid fungus has recently exterminated or impacted many MYLF populations, a few populations have persisted after becoming infected, all of which were abundant and occupied fishless sites. This finding furthers the importance of continuing to remove nonnative trout from high aquatic ecosystems in SEKI.

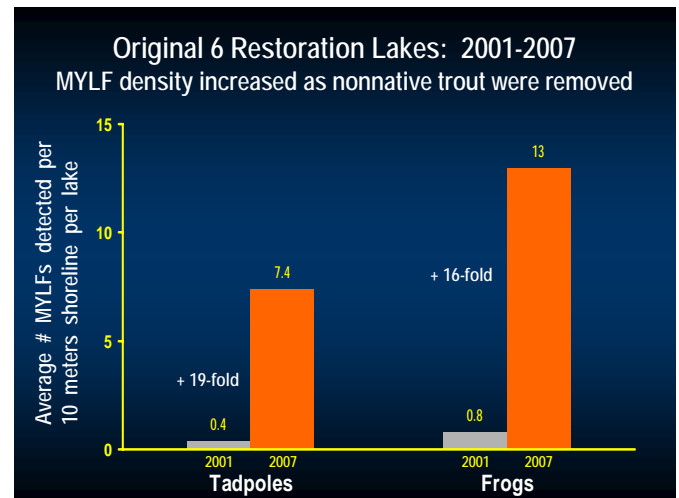


FIGURE 1. Change from 2001 to 2007 in average density of MYLF tadpoles and frogs (# detected per 10 meters shoreline per lake) in six restoration lakes in Sequoia and Kings Canyon National Parks in which nonnative trout were removed beginning in 2001.

TABLE 1. Results of public scoping conducted from January to February 2007. Comments were received from 35 individuals/groups.

Additional Restoration in General	
1. Support additional ecosystem restoration	80%
2. Oppose additional ecosystem restoration	9%
3. Had questions or concerns but did not support or oppose additional restoration	11%
Additional Restoration using Chemicals	
1. Support additional restoration using chemicals	29%
2. Oppose additional restoration using chemicals and/or request EIS if alternative containing chemical use is proposed	46%
3. Had questions or concerns but did not support or oppose additional chemical restoration	25%

PLANNING DECISION

Given that 80% of public comments supported additional ecosystem restoration, SEKI is continuing to propose restoration of additional lakes and streams. In addition, given that this proposal affects no more than 15% of its nonnative fish-containing waters, no less than 85% of its nonnative fish-containing waters will continue to provide recreational angling opportunities. These public comments and restoration objectives were discussed among park and regional NPS natural resources and environmental compliance staff to determine the planning pathway to pursue under the National Environmental Policy Act (NEPA). This interdisciplinary planning team determined that SEKI will conduct a detailed environmental assessment (EA) to analyze the effects of proposed alternatives.

Although the initial estimate to complete this EA was April 2007, the process has taken more time than projected. The comments received were both detailed and varied. SEKI takes these comments seriously, and is dedicating significant time and resources to review, analyze and incorporate them. As a result, the EA has continued to progress for the last nine months.

NEPA PROCESS AND TIMELINE

During the next several months, the interdisciplinary planning team will complete the detailed EA for proposed long-term restoration of MYLFs and aquatic ecosystems within their historic range. SEKI intends to finish this work in early summer of 2008, and make it available for public comment and review. The comment period will be extended from the traditional 30 days to 60 days at that time, and the entire NEPA process is intended to be completed by the fall of 2008.

The overall planning process is thus anticipated to extend over a period of approximately 24 months. The estimated project timeline includes:

Project Initiation:	Oct 2006
Public Scoping:	Jan-Feb 2007
Public Comment Analysis:	Feb-Apr 2007
EA Preparation:	May 2007-Summer '08
Public Comment Period of EA:	Summer 2008 (60 days)
Final Decision Document:	Fall 2008

NEXT STEPS

There is no need to reply to this update. It is meant to inform the public on progress being made on this project. The EA is intended for completion in early summer of 2008, when it will be released for public comment and sent to citizens who commented on the scoping notice. The public comment period for this EA will last for 60 days. To view the project status, visit: <http://parkplanning.nps.gov/parkHome.cfm?parkId=342>

Thank you for your interest in Sequoia and Kings Canyon National Parks, and for your participation in the proposed restoration of mountain yellow-legged frogs and aquatic ecosystems within their historic range.



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