

August 19, 2009

Phil Ginsburg  
General Manager  
San Francisco Recreation and Park Department  
501 Stanyan Street  
San Francisco, CA 94117

Dear Mr. Ginsburg:

We are a group of biologists, herpetologists, ecologists, and hydrologists with collective expertise regarding wetlands, endangered species habitats, and herpetology writing to you regarding the future of Sharp Park in the City of Pacifica.

Sharp Park contains unique coastal wetlands habitat features and is important habitat for two interdependent federally listed species. The extremely endangered San Francisco garter snake, confined to six areas on the upper San Francisco Peninsula, is federally and state listed as endangered. The California red-legged frog, found in wetlands in lowlands in central California, is federally listed as threatened. The red-legged frog is the primary prey species for the San Francisco garter snake.

The San Francisco Recreation and Park Department is currently preparing an alternatives assessment for restoration of Sharp Park, as required by legislation recently passed by the San Francisco Board of Supervisors.

We, the undersigned scientists, contend that restoration of Sharp Park wetlands and uplands habitats and connectivity with protected adjacent open space is the best option to ensure the long term survival of the San Francisco garter snake and the California red-legged frog in the area. We are concerned that certain management activities conducted at the Sharp Park Golf Course are incompatible with restoring healthy populations of these endangered species.

Our expert opinion is based on the following:

Mowing of greens and fairways at the golf course has killed, and likely continues to kill San Francisco garter snakes. Mowing adjacent to aquatic features on the golf course adversely modifies habitat for garter snakes and red-legged frogs.

Water pumping at Horse Stable Pond continues to kill red-legged frogs during breeding season: pumping has been documented to strand, desiccate and kill red-legged frog eggs. Pumping also adversely modifies freshwater foraging habitat for garter snakes, and limits the frog population which is the prey base for garter snakes.

Destruction of rodent burrows and trapping of gophers by the golf course has a detrimental effect on both species: garter snakes and red-legged frogs use gopher holes and other animal burrows as refugia. Not only are gopher and other rodent burrows important habitat features for their survival, but excavating and/or filling burrows can inadvertently harm, crush, and kill these species.

Vegetation management at the golf course has reduced suitable cover and upland hibernation habitat for both the snake and frog. Habitat modification from golf course

maintenance functionally separates foraging and breeding habitat in the lagoon from essential upland habitat for both species.

Numerous pesticides (including fungicides, herbicides, and rodenticides) are known to adversely affect red-legged frogs and San Francisco garter snakes. Despite a San Francisco pesticide ordinance, regulation by the Department of the Environment, and an Integrated Pest Management approach, some pesticides continue to be used at the golf course which could have an impact on water quality within Laguna Salada and a corresponding effect on endangered species.

Inorganic fertilizers used by the golf course containing nitrogen and phosphorous can adversely alter habitat at Laguna Salada and Horse Stable Pond by encouraging rapid cattail growth and eutrophication (stimulation of excessive plant growth due to excess nutrients, reducing dissolved oxygen) of these water bodies, and can be toxic to amphibians and reptiles at high concentrations.

The managed wetland system at the golf course increases flood risk and is not sustainable as presently configured.

We urge the San Francisco Recreation and Parks Department to prepare a comprehensive site restoration plan for Sharp Park that will enhance habitat quality within the park, and significantly restore healthy populations of both the frog and the snake.

We stress that alternatives considered by the Department should be evaluated based on their potential to help the San Francisco garter snake and the California red-legged frog recover, rather than merely halting illegal "take" or harm to these species. Despite federal protection the San Francisco garter snake has been in decline due to continued habitat destruction. The garter snake population at Sharp Park and Mori Point is crucial for the overall survival of the species.

Sincerely,

Robert Battalio, M.Eng., P.E.  
Principal, Philip Williams & Associates  
San Francisco, CA  
Extensive experience with coastal engineering and restoration of coastal lagoons and estuarine areas

Peter Baye, Ph.D. - Coastal Plant Ecologist  
30 years professional experience in applied ecology and botany, with career focus on coastal wetlands, dunes, and beaches

Carlos Davidson, Ph.D. - Conservation Biologist and Ecologist  
Director and Associate Professor  
Environmental Studies Program  
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Expertise in conservation ecology and California amphibians

Robert C. Drewes, Ph.D. Biologist  
Curator of Herpetology  
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Expertise in herpetological systematics and ecological physiology

Ted Papenfuss, Ph.D. – Zoologist  
Research Specialist in Amphibians and Reptiles  
Museum of Vertebrate Zoology  
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Expertise in biogeography and systematics of amphibians and reptiles

Peter H. Raven, Ph.D. – Botanist  
President  
Missouri Botanical Garden  
St. Louis, Missouri  
Expertise and many years of study on the plants of Central California

H. Bradley Shaffer, Ph.D. - Evolutionary and Conservation Biologist  
Professor of Evolution and Ecology  
Department of Evolution and Ecology  
University of California, Davis  
Expertise in conservation genetics and herpetology, with ongoing research on California red-legged frog and other declining California amphibians and reptiles

Todd Steiner - Biologist  
Executive Director  
Turtle Island Restoration Network  
Conducted early 1990s study of garter snakes and red-legged frogs at Shark Park for San Francisco

Samuel S. Sweet, Ph.D. - Zoologist  
Department of Ecology, Evolution and Marine Biology  
University of California, Santa Barbara  
Expertise in vertebrate systematics and evolutionary morphology; herpetology