

Project Title: "AN INTEGRATED WATER QUALITY AND WATERSHED PRESERVATION PROGRAM: The San Diego Wild Animal Park's plan for improving water quality, enhancing wetlands habitat, and reducing water consumption"
 Project Contact: Donald L. Janssen, DVM, Dipl ACZM, San Diego Wild Animal Park

**Proposition 50 Integrated Regional Water Management (IRWM)
 Project Proposal Form**

Detailed guidance on the Integrated Regional Water Management (IRWM) Grant Program can be found on the State Water Resources Control Board's Prop 50 Integrated Regional Water Management (IRWM) grant program web page at: <http://www.swrcb.ca.gov/funding/irwmgp/index.html>. Please familiarize yourself with the general requirements of this program before preparing and submitting a project proposal.

Completed forms should be submitted no later than December 1, 2004, either via email to jon.vanrhyn@sdcounty.ca.gov or mailed to the following location:

Jon Van Rhyn
 County of San Diego
 Watershed Protection Program
 9325 Hazard Way
 San Diego CA 92123 PHONE: 858-495-5133 FAX: 858-495-5263

SECTION A – PROJECT INFORMATION

1. Project Title	"AN INTEGRATED WATER QUALITY AND WATERSHED PRESERVATION PROGRAM: The San Diego Wild Animal Park's plan for improving water quality, enhancing wetlands habitat, and reducing water consumption"
2. Contact Information	
Agency/organization	San Diego Wild Animal Park
Address	15500 San Pasqual Valley Road Escondido, CA 92027-9614
Phone	(760) 291-5401
E-mail	djanssen@sandiegozoo.org
Submitted by (name & title)	Donald L. Janssen, DVM, Dipl. ACZM, Associate Director of Veterinary Services
3. Project Location (City/Community)	Local – San Diego County; Regional; National; and International
4. Watershed (if multiple or regional, please indicate)	San Dieguito River Watershed
5. Amount Requested	\$8,000,000
6. Match Information (a minimum 10% match is required for all projects):	
Estimated match amount	\$800,000
Has a match been identified (y/n)?	Yes.

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<p>If so, please identify the source(s)</p>	<p>The David William Upham Foundation and the Zoological Society of San Diego (Society). The Society commits to seek additional funding support from non-state sources that would be used to bring the project to its completion.</p>
<p>7. Status of Project (conceptual, designed & ready to build, CEQA completed, etc.)</p>	<p>The project is in its conceptual stage, with approval to move forward by executive staff at the Society. The Society will begin the project's planning phase in April 2005, with implementation beginning immediately following the planning phase.</p>
<p>8. Project Description (less than 100 words)</p> <p>At its Wild Animal Park in the San Pasqual Valley, the Society wishes to restore native riparian habitat within its extensive field exhibits and install barriers to exclude animal stock from natural waterways. The Society also desires to re-route, treat, and reuse water needed for irrigation, wash-down, and exhibit elements (lagoons, streams, and waterfalls, etc.). Furthermore, it is envisioned that down-slope wetlands will be enhanced in capacity and quality. This plan will benefit the health of collection animals and help conserve native wetland/riparian species of wildlife and could be used as a visible model for outreach to the community.</p>	
<p>9. Additional information (include photo, regional map, text as needed. Please limit entire document to 3 pages or less):</p> <p>Please see the additional explanatory text and photographs:</p> <ol style="list-style-type: none"> 1. Project goals. 2. Proposed implementation projects. 3. Maps and photographs. 	

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SECTION B – SUPPLEMENTAL INFORMATION

1. CWC section 79561 states that eligible projects must include one or more of the water management elements listed below (see Guidance Section III.C.). Please check all that apply to your proposed project.

- Programs for water supply reliability, water conservation, and water use efficiency
- Storm water capture, storage, treatment, and management
- Removal of invasive non-native plants, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands
- Non-point source pollution reduction, management and monitoring
- Groundwater recharge and management projects
- Contaminant and salt removal through reclamation, desalting and other treatment technologies
- Water banking, water exchange, water reclamation and improvement of water quality
- Planning and implementation of multipurpose flood control programs that protect property; and improve water quality, storm water capture and percolation; and protect or improve wildlife habitat
- Watershed management planning and implementation
- Demonstration projects to develop new drinking water treatment and distribution methods

2. The Dept. of Water Resources (DWR) and State Water Resources Control Board (SWRCB) have established the statewide priorities listed below for guiding the selection of projects for funding (see Guidance Section II.E.). Please check all that apply to your proposed project.

- Reduce conflict between water users or resolve water rights disputes, including interregional water rights issues
- Implementation of Total Maximum Daily Loads that are established or under development
- Implementation of Regional Water Quality Control Board Watershed Management Initiative Chapters, plans, and policies
- Meet Delta Water Quality Objectives
- Implementation of recommendations of the floodplain management task force, desalination task force, or recycling task force;
- Address environmental justice concerns
- Assist in achieving one or more goals of the CALFED Bay-Delta Program

NOTE: The eligibility requirements and statewide priorities listed above should be considered minimum screening criteria for project selection. Additional prioritization criteria will be identified once regional goals have been established for the draft IRWM Plan. In general, applicants should assume that preference will be given to projects that are regional, multi-functional, and able to demonstrate multiple benefits.

NOTE: Proposals that include on-stream or off stream surface water storage facilities are not eligible.

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ADDITIONAL EXPLANATORY MATERIAL

Project goals: To ensure that water at the WAP is managed in such a way that

- 1) Captive and free-living wildlife have access only to healthy water environments and habitats, that
- 2) Employee and public health is not at risk through unhealthy water exposure, that
- 3) These managed environments add to the guest experience, that
- 4) Our successful story can be used as a visible example to our industry and community and a model for outreach to other land-managers in the region, that
- 5) The WAP consume less imported water, and that
- 6) The WAP watershed is managed in an environmentally responsible manner for the benefit of the San Dieguito watershed and community stakeholders.

Possible implementation projects:

- 1) Increase the capability of the existing wastewater treatment plant from secondary to tertiary and upgrade the water distribution system. This would allow wastewater to go directly to any enclosure waterway and would improve the water flow and quality through enclosures. (Fig. 2) This is considered a highly urgent need.
- 2) Increase water volume and flow to dilute contaminants and provide water for wetlands habitats.
- 3) Develop riparian wetlands areas through natural waterways (i.e. riparian strips through animal enclosures and new wetlands construction above and around ponds). (Fig. 4)
- 4) Develop riparian wetlands restoration in land south of highway 78 for water containment, mitigation credits, and water reuse (pumped back to WAP for reuse).
- 5) Design a hardscape (e.g. parking lots and new construction) runoff capture and recycling plan.
- 6) Design water/mud wallows (e.g. for rhinos) that can be maintained and not foul the waterways.
- 7) Design aesthetic fencing for excluding collection hoof stock from natural waterways. (Fig. 4)
- 8) Insert a solid's separator from the elephant pool and route water through wastewater treatment plant.
- 9) Design pond containment structure as alternatives to earthen design to improve ability to clean and maintain.
- 10) Install additional water storage facilities for well water to decrease reliance on pumps.

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Figure 1. Aerial photograph taken in 1953 showing vicinity of the future Wild Animal Park. Overgrazing and riparian habitat degradation is evident. Note the livestock pond that was retained and is now part of the "Asian Swamps" exhibit.

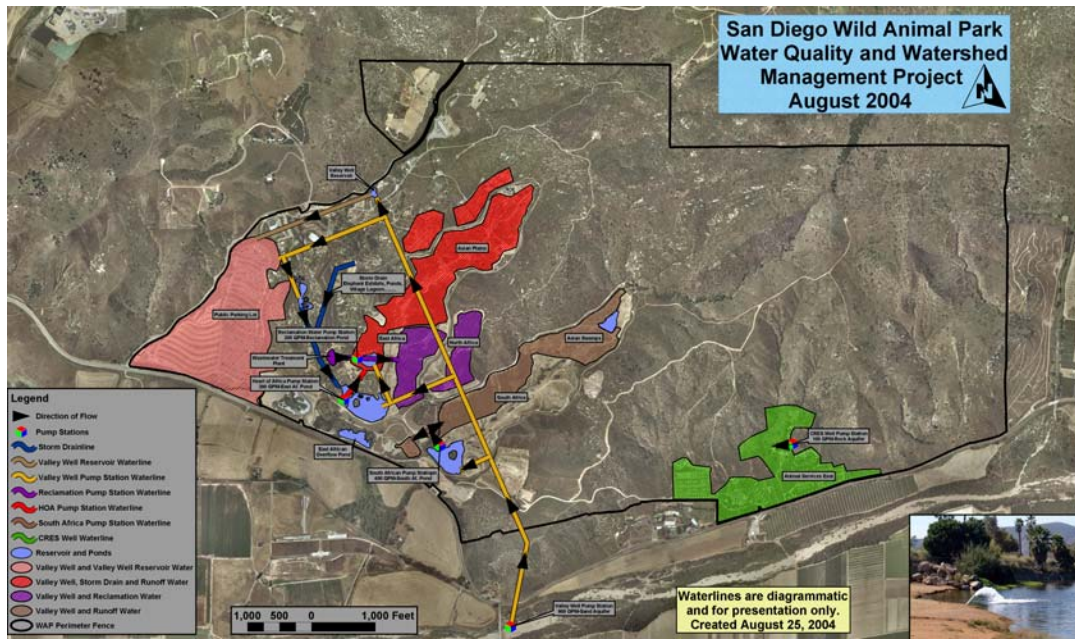


Figure 2. Current non-potable water supply and distribution system. Note the "Valley Well" is the primary water source. Water from the wastewater treatment plant is released in limited areas marked in purple. Most runoff from exhibits and hardscape flows into the "East Africa" pond.

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Figure 3. Overview of the South Africa exhibit showing natural waterways and constructed pond element. The East Africa pond is in the distance. Animals would be excluded from water features to allow wetlands construction and riparian habitat restoration.

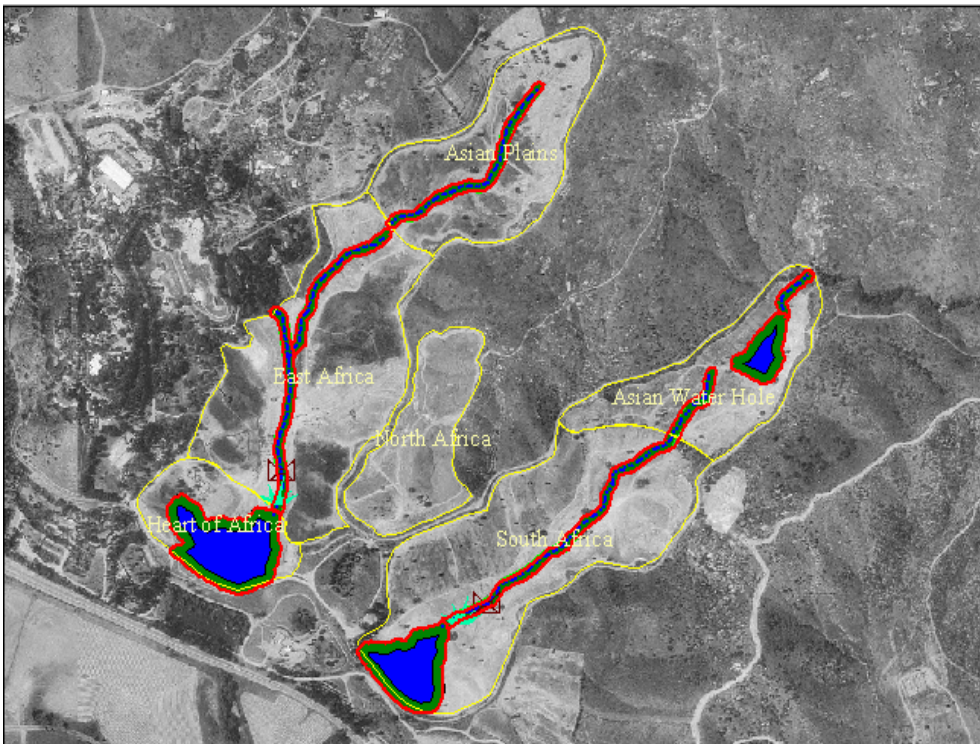


Figure 4. Riparian restoration and wetland construction plan for large exhibits. Red indicates animal exclusion barriers. Green represents stream corridor improvements and riparian habitat restoration. Sediment basins and wetlands construction are indicated by the brown and turquoise, respectively. This image and portion of the proposal is courtesy of Mr. Jason Jackson, USDA, National Resource Conservation Service, Escondido office.