TOPANGA CREEK WATERSHED MANAGEMENT PLAN

Compiled by:

THE TOPANGA CREEK WATERSHED COMMITTEE
JULY 1998 – OCTOBER 2001

REVISED MAY 2002

TOPANGA HISTORICAL SOCIETY

ABOUT WATERSHEDS

By Gary Snyder

Taken from:
A Place in Space: Ethics, Aesthetics, and Watersheds
Counterpoint Press, Washington DC 1995

"A watershed is a marvelous thing to consider: this process of rain falling, streams flowing, and oceans evaporating causes every molecule of water on the earth to make the complete trip once every two million years. The surface is carved into watersheds– a kind of familial branching, a chart of relationship, and a definition of place. The watershed is the first and last nation whose boundaries, though subtly shifting, are unarguable. Races of birds, subspecies of trees, and types of hats or rain gear often go by the watershed. For the watershed, cities and dams are ephemeral and of no more account than a boulder that falls in the river or a landslide that temporarily alters the channel. The water will always be there, and it will always find its way down. As constrained and polluted as the Los Angeles River is at the moment, it can also be said that in the larger picture that river is alive and well under the city streets, running in giant culverts. It may be amused by such diversions, but we who live in terms of centuries rather than millions of years must hold the watershed and its communities together, so our children might enjoy the clear water and fresh life of this landscape we have chosen. From the tiniest rivulet at the crest of a ridge to the main trunk of a river approaching the lowlands, the river is all one place and all one land.

The water cycle includes our springs and wells, our Sierra snow pack, our irrigation canals, our car wash, and the spring salmon run. It's the spring peeper in the pond and the acorn woodpecker chattering in a snag. The watershed is beyond dichotomies of orderly/disorderly, for its forms are free, but somehow inevitable. The life that comes to flourish within it constitutes the first kind of community."

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EXECUTIVE SUMMARY

Using the recommendations provided by the Draft Topanga Creek Watershed Management Study 1996 as a starting point, the Topanga Creek Watershed Management Plan seeks to provide an updated version of voluntary guidelines discussed and agreed upon by participating stakeholders. These guidelines provide concerned stakeholders with a road map for implementing a variety of preventative planning strategies and Best Management Practices that reflect our current understanding of the inter-relationships and connectedness of the physical, chemical, biological, economic, and social aspects of the Topanga Creek Watershed. The recommendations are based on the following premises:

- The Topanga Creek Watershed is a diverse area with many uses including residential and business development, infrastructure (roads and utilities), wilderness recreation for an urban population, and important biological habitat. Because of the historical pattern of development in the canyon, many of these uses are concentrated along the major creek channels.
- Land uses throughout the canyon that increase the rate and volume of runoff will have their major impact along the creeks where existing residences, roads, utilities and sensitive riparian habitat occur. Protection of existing life and property, and the riparian habitat, requires an integrated management approach to the entire watershed.
- Natural systems in Topanga are driven in large part by catastrophic events, like floods, earthquakes and wildfires, which can dramatically change the environment. The recommendations presented in this document are an attempt to provide guidance based on our understanding of the system at present. We know that things will change, and that we will need to change with them. The format of this document is designed to allow continuing revisions as the need arises.
- Finally, the process of reviewing the 1996 recommendations revealed how much we have already accomplished! (See Section 10. Looking Back). We note which recommendations have been implemented. We also indicate those that can be voluntarily implemented by the community and those that will require some legal support. Lastly, we also have identified new recommendations that appear to fit into the overall management plan.

A major departure from the 1996 document is the reorganization of the recommendations according to the categories identified by the Topanga Creek Watershed Committee. Thus, we hope to provide an easy to use, educational set of actions that can be voluntarily implemented in order to contribute to the long-term sustainability of Topanga Creek.

We have not yet lost Topanga Creek. It is impossible to say if we are close to the threshold or not. Taking action NOW means that we can actively participate in preserving and protecting the wild and wonderful Topanga Creek that defines our community.

A. WATERSHED DESCRIPTION

The Topanga Creek watershed is the third largest watershed in the Santa Monica Mountains. The watershed is a north-south trending, Y-shaped canyon, that covers approximately 18 square miles with elevations reaching from over 1700 feet to sea level. The 9-mile axis of the main drainage drops an average of 250 feet/mile, creating narrow, steep sided canyons with exposed walls of sedimentary rocks dating from 14-17 million years ago.

Topanga Creek is a geologically young, interrupted stream with perennial pools that are fed by numerous springs and tributaries along its two main branches. The mouth of the creek emerges into Santa Monica Bay through a small estuary, Topanga Lagoon, which historically covered over 30 acres. There is a major surfing beach at Topanga Beach.

Topanga Creek is an important, relatively natural creek within the Santa Monica Mountains, which supports a large diversity of plants and animals, many of which are increasingly rare. Reproducing populations of endangered steelhead trout and tidewater gobies, as well as numerous species of special concern have been documented

Since the early 1900s, a predominantly rural community has expanded to the present population of approximately 12, 000 residents. The community initially developed along the creeks, Old Topanga Canyon Road, and Topanga Canyon Boulevard (State Highway 27), and has more recently expanded into the surrounding hills and ridges. Highway 27 itself has evolved into a major commuter route from the San Fernando Valley to the Westside and the beaches, with approximately 30,000 car trips per day. Close to a million people visit the Topanga Creek Watershed annually, to enjoy the numerous parks of the Santa Monica Mountains National Recreation Area that are located here.

Population changes over time in Topanga

*From The Topanga Story, Topanga Chamber of Commerce, and US Census data

1960: under 3,000	1980: 6,000
1969: 4,500	2000: 12,000

Land Use in the Topanga Creek Watershed, 2002

*Based on GIS data from NPS and SCAG

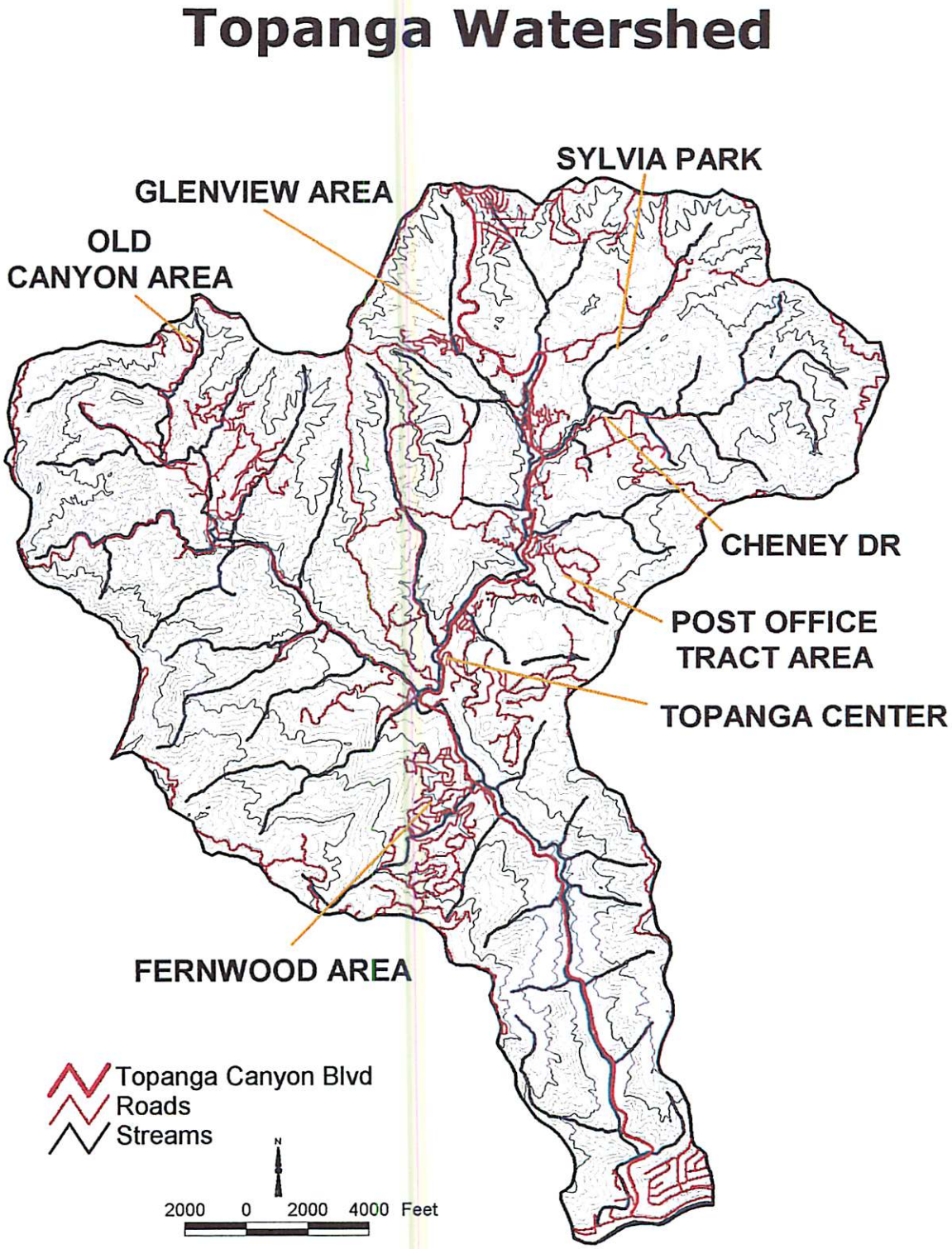
Public Lands: 8,000 acres

Topanga State Park (CA Dept. of Parks and Recreation)	5,628 acres
Santa Monica Mountains Conservancy	1,311 acres
National Park Service	244 acres
Mountains Restoration Trust	402 acres
Other agencies	415 acres

Private Lands: 4,800 acres

Developed private lands	1,718 acres
Undeveloped private lands	3,083 acres

B. Map of the Topanga Creek Watershed



C. TOPANGA CREEK WATERSHED: What makes it so special?

What is a watershed?

A watershed is a geographic area that collects all the rainfall into a series of drainages and creeks, eventually reaching the sea. The water that runs off every roof, every driveway, and every road meanders its way into Topanga Creek. At 18 square miles (12,800 acres), Topanga Creek is the third largest drainage into the Santa Monica Bay. The largest watershed is Malibu Creek (109 square miles) and the second largest is Ballona Creek (88 square miles).

What makes the Topanga Creek Watershed unique?

Think about the community we call Topanga. It is the creek that defines the community on many levels, from placement of the homes, utilities and roads (along the floodplain), to how natural disasters like wildfires and floods impact our lives. The center of town is where the main stems of the Creek meet from Old Topanga and along Topanga Canyon Blvd from the Top of Topanga. Most of the creek banks are held in place by native trees and plants, creating a beautiful landscape. The life of the creek is punctuated with catastrophic events that can change it dramatically.

Topanga Creek has a great diversity of native plants and animals. From endangered steelhead trout and rare western pond turtles, to the majestic coast live oaks and sycamores that frame the creek, the community of Topanga extends a welcome to over 22 amphibian and reptile species, 3 species of native fish, 9 species of bats, numerous rare mammals like ringtail cats and badgers, as well as over 100 resident and migratory birds. Unlike other nearby creeks, only small, isolated populations of exotic animals like crayfish and bullfrogs are found. While invasive plants like Giant Bamboo (Arundo) and Cape Ivy are a problem, they have not yet overwhelmed the natural vegetation.

We have not yet lost our creek

The goal of the Topanga Creek Watershed Committee is to encourage voluntary stewardship efforts that will keep our creek healthy. That is why education is so critical. If all stakeholders in the watershed learn about how their actions can make a real difference, then together we can find the path to living in harmony with our watershed.

What can you do to make a difference?

As caring stakeholders, you can lead the way to greater understanding of how all our actions are directly connected to the long-term sustainability of Topanga Creek. We all live and work somewhere in the watershed, and as the saying goes, everything does move downhill! So each lesson shared with a neighbor, or stewardship action taken on your land, has direct impacts on the health and well being of the entire Topanga Creek Watershed.

Like the ripples of a pebble thrown into the creek, your stewardship efforts spread the understanding of our connectedness throughout the community. With your help, the Topanga Creek Watershed Committee hopes to develop meaningful ways to educate present and future residents of Topanga that translate into direct benefits to not only the human community, but to all the plants and animals that share our home. Thanks so much for your help in this important effort.

D. TOPANGA CREEK WATERSHED: Wet, Wild and Wonderful!

By Rosi Dagit

Reprinted with permission from the *Topanga Messenger*, Vol. 21, No. 18, September 1997
and updated in October 2001 to reflect current knowledge

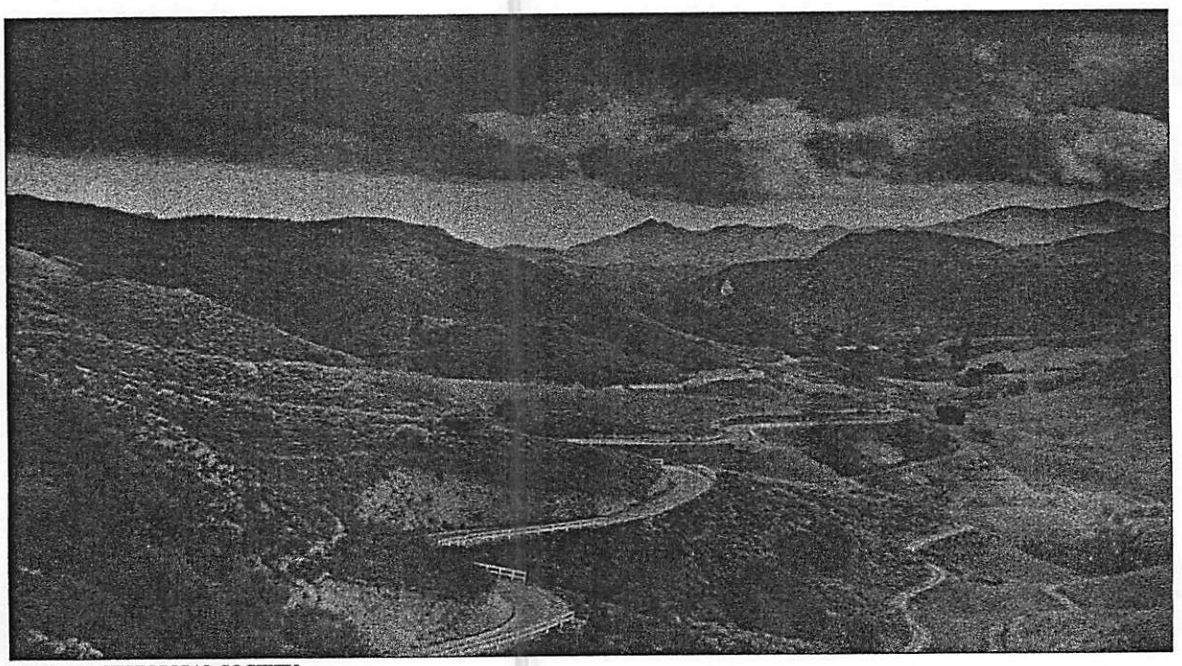
Topanga Canyon folks know where we live. Or do we? We talk about "the Canyon," but what defines our boundaries? Unlike other communities where borders are based on streets and politics, Mother Nature has defined our space.

Imagine a large teardrop bowl, slightly misshapen by the cosmic potter's hand. Saddle Peak, Red Rock, Calabasas Motorway, Henry Ridge, Top of Topanga, Summit Pointe, Viewridge, Santa Maria, the backside of Paradise Lane, Eagle Rock and the Parker Mesa Ridge create the rim. All the rain that falls within this area finds its way into Topanga Creek and to the ocean. The 18 square miles containing 12,400 plus acres have intertwined drainages which become the Topanga Creek Watershed.

What difference does a watershed make? A lot. Either you're in or you're out. The amount of run-off during a storm determines the fate of our roads. Some 200 homeowners along the Creek need to know if floods will endanger their homes. Surfers and swimmers are concerned about water quality down at the beach. Approximately 750,000 people visit Topanga State Beach each summer. We are fortunate to have so many "Topangans in spirit," even if they're not "Topangans in drainage."

Systems of watersheds collectively drain into larger geographic areas. The Santa Monica Bay has 28 different watersheds that supply fresh water to the system. Malibu Creek Watershed at 109 square miles is the largest. Tuna Canyon Watershed at 1.47 square miles is one of the smallest. Each has different characteristics due to steepness, geologic features and vegetation. In some watersheds, the majority of the main creeks and channels are now concrete flues with little biological function left. Just look at what was once the Los Angeles River.

Topanga Creek Watershed is the third largest in the Santa Monica Bay system and one of the least altered. Although some sections of the creek are armored with concrete, old stone walls or piles of boulder riprap, much of our streambeds are still stabilized by trees and shrubs. Upslope development has generally left hillsides intact, only slightly modifying the lay of the land and water flow.



TOPANGA HISTORICAL SOCIETY

Most unique is the amount of protected open space within the watershed. Over 2/3 of the watershed is undeveloped, with close to 8,000 acres contained in local parks. With the 2001 addition of the Lower Topanga Park, and various smaller parcels in the upper watershed, a vast majority of the land is permanently protected. Studies are underway to evaluate the feasibility of restoring the historic Topanga Lagoon, which once covered almost 30 acres at the mouth of the Creek. With this opportunity comes responsibility. Those of us who live or work in the watershed need to be careful stewards in order to ensure the long-term viability of the entire community.

THE WET PART

Much of the process has been shaped by water — how much and how long it flows. The Topanga Creek Watershed is quite young in geologic terms, a baby at 14-18 million years. Young streams are known to be unruly, eventually wearing down even the most stalwart rocks. They don't like confinement and take every opportunity to explore new paths, meandering at will. This is a lively process to watch unless you happen to live in the floodplain. Its not too amusing when the stream leaps over its banks and into your living room — a fairly common occurrence along boisterous young streams in full run.

The more sober minded engineers and hydrologists responsible for keeping people safe have tried many different ways to impose constraints on these rowdy events. First, they examine closely the shape, width and depth of the stream channels. Then using computer models, they calculate how much water could be expected to flow through the channels under specific storm conditions. They are always talking about 2, 5,10, 20, 50 and 100 year storms. These "design storms" refer to modeled predictions of how often storms of different intensities are likely to occur. For example, 1980 was considered an 83-year storm, while 1995 was only a 13-year storm according to LA County Department of Public Works. The El Nino winters of 1982-83 and 1997-98 did not cause a major problem in Topanga, even though they were very wet.

Sometimes the models are not in sync with reality. Stream gages which actually measure creek flow are used to make real world corrections to the models. The gage in Topanga Creek blew out in the 1980 flood, again from 1990 – 1996 and was only recently replaced. The expected "normal" flow is estimated to be roughly 5,000 cubic feet per second during the wet season. LA County Department of Public Works estimates that under 50 year "design storm" conditions, 22,000 cubic feet per second flows down the Topanga Watershed, through the lagoon and into the Bay. This is based on an extremely rare scenario – a 50-year storm event following a fire throughout much of the watershed. Their calculations and hydrologic modeling have been a source of concern to creekside residents.

The current piecemeal approach to problem solving along the creek could be replaced by a more coordinated vision that incorporates downstream impacts. The goal is to eventually manage the watershed as an integrated whole, recognizing that grading and drainage changes at the top of the hills, driveway and roof runoff, stabilizing streambanks, pruning roadside trees and clearing brush all have an effect on how the Creek responds during storm events.

To that end, the Topanga Creek Lagoon and Watershed Restoration Feasibility Study began in 2000 to develop the baseline information needed in order to better understand the complicated interactions between the creek, roads, utilities and homes competing for space along the narrow canyon corridors. Funded by grants from the CA Coastal Conservancy and the Santa Monica Bay Restoration Project, a series of studies began to compile the historic picture of creek flow related to precipitation since 1938, the changes in the creek and lagoon since 1876, impacts from flood events, the background levels of erosion and sediment delivery, and the relationship of present land use and road maintenance practices to the stability of the creek banks.

A comprehensive model of the watershed is being constructed after careful calibration using real storm event data. This information will lead to informed planning to deal with several known problem locations in the watershed, including several landslides, and areas of unstable streambanks. Most importantly, it will provide direction on how restoration of the historic lagoon that used to cover over 30 acres at the mouth of Topanga Creek could be accomplished.

In addition to the amount of water moving through the creek, there is tremendous concern about the quality of the water. The Los Angeles Regional Water Quality Control Board is preparing Total Maximum Daily Load (TMDL) limits for all pollutants of concern that end up in the Santa Monica Bay. Topanga Creek has been listed for lead problems in the upper watershed and for bacteria problems at the beach. In order to learn more about the water quality status, the Topanga Creek Stream Team was formed.

The volunteers of the Topanga Creek Stream Team collected water quality data and samples from 15 locations throughout the watershed each month from July 1999 to June 2001. The results of their efforts have been published as the Topanga Creek Report Card. In summary, it was found that there are no heavy metal or nutrient loading problems in the upper watershed. Several "hot spots" where fecal bacteria counts were consistently high were found, including Entrado Rd., Highvale Rd., Falls Dr. and behind the Topanga Market. Despite these higher than acceptable contributions, when the water reached the bridge 2 miles upstream from the ocean, it was fine, except immediately following big storm events.

It appears that there is no present substantiation for the lead listing, and the data collected should be sufficient to have that listing reconsidered. A closer look at the lagoon/ocean interface indicates that the bacteria problems at Topanga Beach come from a source below the 2-mile bridge. When the sand berm forms each summer, water quality improves. With opening following storm events, the water from the lagoon causes problems at the beach. Further studies are underway or proposed to better understand the possible sources of bacterial contamination of the beach.

THE WILD PART

In addition to being young and feisty, Topanga Creek Watershed embraces diversity of all kinds. Thanks to our streamside woods, and oak- chaparral covered hillsides, there is food and shelter for a huge variety of plants and animals.

Take the creepy crawlies for example. A 1986 survey of reptiles and amphibians found that 22 species make their homes among us. Other large watersheds like Arroyo Sequit, Trancas and Zuma had at most 9 species. But that's just the beginning. In spring 2000 and 2001, local biologists and Topanga Creek Stream Team Volunteers went back to see how many species remain. The final counts are not yet in, but it was reassuring to find dozens of California Newts, Two Striped Garter Snakes, Canyon Tree Frogs and Western Toads. The resurgent population of Western Pond Turtles, with new sightings at 3 locations in the canyon is very encouraging.

Gerry Haigh and the birders of Topanga estimate that at least 111 kinds of our feathered friends either live here or stop in for seasonal visits. Over 35 different species are confirmed breeders. The hawks that we take for granted here are protected by either State or Federal law due to their scarcity in other places. Some 10 different kinds of birds we commonly see really are that rare.

Among the furry folk, we have everything from tiny field mice and opportunistic pack rats, to bats roosting under the bridges. Predators like badgers, ringtail cats, bobcats, coyotes and mountain lions prowl the night, taking advantage of the open spaces and abundance of small yummy meals. Badgers and ringtails are still found in Topanga, even though they are loosing ground in other parts of the Santa Monica Mountains. Even the skunks are still here in number!

We even have several species of plants found in only a few other places. Clusters of endangered Santa Monica Dudleya can be found clutching precariously to the volcanic slopes. Big Leaf Maples, and Cottonwoods still can be found along the creek. Our trees hide the Arboreal Salamander.

Perhaps most exciting is the April 2000 discovery of adult steelhead trout in the Creek. An on-going study indicates that spawning took place and baby trout are trying to make their way through the dry season and out to sea when the rains begin. Another endangered fish, the Tidewater Goby was also documented in Topanga Lagoon. Schools of native Arroyo Chub can be found in every stretch of the Creek. Careful searching indicates that Topanga Creek hosts only native fish species, with few of the introduced exotic predators like crayfish, mosquitofish and bullfrogs that can decimate local species.

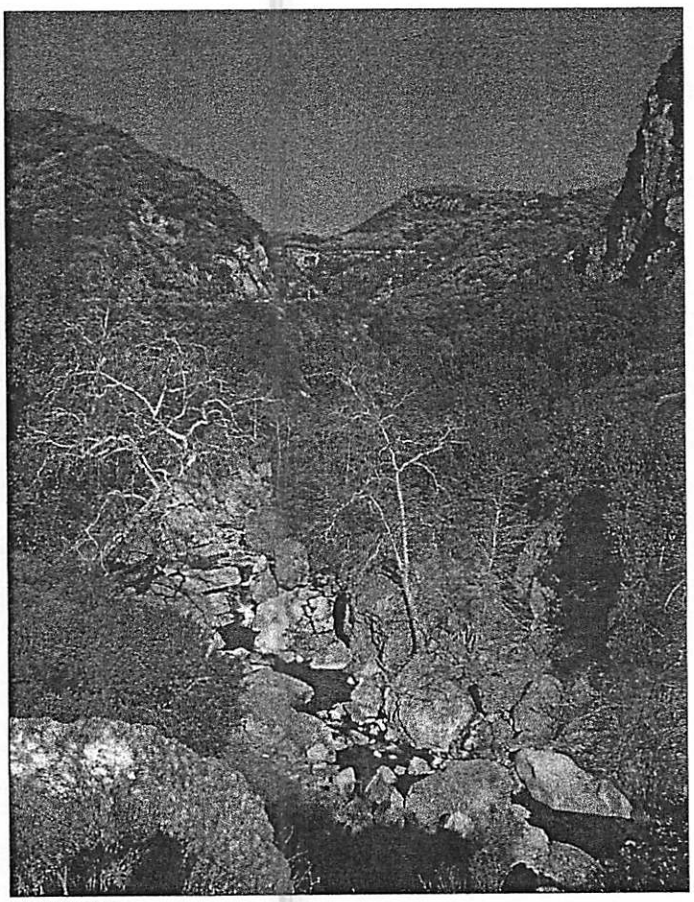
Loss of habitat overall makes the pockets remaining in the Topanga Creek Watershed especially critical. This variety of rare or threatened animal and plant populations makes Topanga one of the more ecologically important watersheds in the Santa Monica Mountains.

THE WONDERFUL PART

Whether you know the boundaries or not, chances are you still appreciate just how wonderful it is to live in the Topanga Creek Watershed. Like our plant and animal neighbors, the human residents of Topanga enjoy the wild nature of the watershed, except when the fires rage, the floods roar and the earth trembles! Or maybe it's because Topangans have survived these forces of nature, that we are trying to live with, rather than exert control over, the world of our Creek. But becoming integrated into the watershed requires a delicate balancing act.

Topangans have a responsibility to think ahead, plan carefully. Everything we do from the ridges down to the Creek adds up. If we want to enjoy the exuberance of our creek, then we need to think before we act. What will happen if the hilltop is leveled? How can we balance the need to protect our homes from fire and still prevent erosion and flooding downslope? How can the trees be pruned to provide line clearance and still hold up the slopes? Being a part of the watershed means asking these questions and more, and seeking realistic answers.

Perhaps we should take our cue from Tao te Ching who said, "The highest motive is to be like water. Water is essential to all living things, yet it demands no pay or recognition. Rather it flows humbly to the lowest level. Nothing is weaker than water, yet for overcoming what is hard and strong, nothing surpasses it."



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E. Mission Statement

Topanga Creek Watershed Committee

The mission of the Topanga Creek Watershed Committee is to coordinate and implement a consensus-based, voluntary, sustainable, Coordinated Resource Management Plan (CRMP), that integrates the needs and concerns of the community, and addresses all aspects of watershed ecology and watershed management.

The Topanga Creek Watershed Committee represents all stakeholders in the watershed and is open to all interested citizens who desire to demonstrate respect for our ecosystem, of which we are a part.

Every resident of Topanga receives the spiritual, aesthetic, ecological, and economic benefits that come from living in a healthy watershed. We wake to the rustling of the oaks and are serenaded to sleep by owls, frogs and coyotes. In return, we each need to recognize the impacts of our actions on this fragile resource, and take responsibility for leaving it viable for generations to come.

F. TOPANGA CREEK WATERSHED COMMITTEE GOALS

Goals of the Topanga Creek Watershed Management Plan (March 2002)

Archeological and Cultural Resources:

- To support preservation of the archeological and cultural resources found within the Topanga Creek Watershed.

Economics:

- Integrate the economic concerns of private citizens (not just Topangans) and those of public agencies.
- Identify and quantify the economic benefits of the natural resources in the Topanga Creek Watershed.

Education and Outreach:

- Promote greater awareness and understanding of the complex relationships between humans and the watershed necessary to preserve native biodiversity and natural processes.
- Coordinate Federal, State and County regulations to provide a comprehensive integrated management plan.
- Encourage agencies and utilities to adhere to the same guidelines and regulations as non-governmental agencies and citizens.
- Develop an outreach program to inform residents of flood and fire hazards and ways to protect themselves.
- Provide a community forum for education regarding Best Management Practices which can reduce the flood and fire hazard.
- Provide a cooperative forum encouraging coordinated voluntary efforts to minimize the flood and fire hazard.
- Evaluate existing risks to public safety and develop programs to address them.

Flood and Fire Hazard Protection:

- Develop an integrated, environmentally sustainable strategy for reducing flood and fire hazards.
- Define the flood hazard problem in terms of potential harm to people, structures and the stream course/riparian habitat.
- Encourage all property owners in the watershed to contribute to flood and fire hazard mitigation.
- Reduce the flood hazard by implementing measures to reduce existing peak flow runoff.
- Ensure that no existing life and property be placed at risk from hazards created by increases in peak flow runoff produced by new development.

Land Use: Grading, Drainage, Erosion Control

- Reduce land use impacts to preserve native biodiversity.
- Regulate new development in the riparian zone to prevent increases in flood hazard.
- Promote the use of "preventative planning" review which incorporates environmental constraints into the site evaluation process to reduce possible impacts or need for mitigation.
- Promote use of Best Management Practices that reduce grading, drainage and erosion control impacts.

Natural Environment:

- Restore and preserve native biodiversity and the natural processes that support it.
- Preserve and rehabilitate the stream channel and floodplains to restore natural channel capacity wherever feasible.
- Protect the riparian habitat which plays a crucial role in intercepting rainfall, reducing stormwater runoff, maintaining slope stability, and allowing for greater groundwater recharge.
- Create a master resource inventory database (or system) and a mechanism for sharing information gathered by federal, state and local agencies.

Recreation:

- Provide opportunities for healthful passive recreation, while minimizing impacts to native biodiversity.

Transportation:

- Preserve integrity and safety of transportation corridors through a sustainable maintenance program that minimizes impacts to native biodiversity and natural processes.

Water Quality:

- Improve water quality.
- Preserve or improve water quality for maximum use and enjoyment by reducing erosion, sedimentation, point and non-point source pollution.

Looking Ahead: Research and Restoration Programs:

- Identify research and restoration actions that are needed to preserve and protect native biodiversity.
- To identify sources of point and non-point pollutants entering the stream; to determine any impacts of these pollutants; and to recommend specific measures to eliminate or mitigate pollution problems.
- To identify specific sites contributing to high levels of sediment and erosion flow into the stream. Evaluate and refine appropriate Best Management Practices.
- To locate areas where slopes are unstable. Evaluate bio-engineering, gabion, and other environmentally sound solutions and recommend appropriate standards for specific sites. Perform a similar study for sites where grouted rip rap has been placed.
- To identify all trees that are within the projected flood zone that maintain streambank stability. Determine possible remedial efforts that could improve existing tree health. Identify locations needing revegetation in order to enhance streambank stability.

- To monitor the biodiversity of the watershed and identify potential indicator species which could alert us to major shifts or losses. To involve the community in maintaining diverse habitats to support the large number of plant and animal species within the riparian zone.
- To identify areas impacted by invasive exotic plants and animals. Establish an eradication program.
- To reestablish a functional lagoon at the mouth of Topanga Creek.

Goals of the Draft Topanga Creek Watershed Management Study (1996)

1. To improve public safety and protect existing life, infrastructure, and property from flood hazards.
2. To establish a Watershed Management Committee as a permanent administrative body to implement, monitor and coordinate the Topanga Creek Watershed Management Plan.
3. To provide a community based educational forum regarding Best Management Practices that reduce flood hazards.
4. To preserve and protect the creek environment.

G. How The Topanga Creek Watershed Committee Evolved

In 1990, the Los Angeles County Department of Public Works proposed to adopt a Floodway Ordinance for the upper portion of Topanga Creek adjoining Topanga Canyon Boulevard. The Floodway Ordinance was intended as a regulatory tool to mitigate potential flood hazards associated with development in, or adjacent to, the Topanga Creek floodplain. Topanga residents reviewed the proposed ordinance and identified a number of significant concerns including the efficacy of the ordinance to protect residents from flood hazard, and the long-term environmental and social impacts that would result from adoption of the ordinance.

In response to their concerns, Los Angeles County Supervisor Ed Edelman asked Topanga residents to prepare an alternative plan to the Floodway Ordinance. In September, 1992, the Topanga Canyon Floodplain Management Citizens' Advisory Committee (TAC) presented their report "An Alternative Plan to the Proposed Topanga Canyon Floodway Ordinance," to the Board of Supervisors. The Board accepted the report and in March, 1993 TAC was directed by the Board of Supervisors to prepare a watershed management study to address flood concerns including means to reduce storm water runoff, control soil erosion, and improve water quality.

With the continued support of Supervisor Zev Yaroslavsky, the Topanga Canyon Floodplain Management Citizens' Advisory Committee completed its study for the Board of Supervisors in April 1996.

The recommendations of the Draft Topanga Creek Watershed Management Study were presented to the Board of Supervisors as a set of action items that will allow integrated management of the flood hazards in Topanga Canyon. The study recognized the need for fiscal austerity at all levels of government and the recommendations are intended as cost effective strategies which will be of benefit to all of Los Angeles County.

A key component of the study was the recommendation to form a Topanga Creek Watershed Committee whose mandate was to develop a set of voluntary, consensus based guidelines to help accomplish not only flood hazard protection, but set a standard of stewardship that recognized the connectivity of all aspects of the watershed.

The Topanga Creek Watershed Committee was started in July 1998, with initial start-up funding from the CA Department of Conservation and sponsorship by the Resource Conservation District of the Santa Monica Mountains. Using the Coordinated Resource Management Plan (CRMP) template, a group of voluntary stakeholders representing all community groups and agencies involved in the watershed convened. The efforts of this committee continue to build upon the solid foundation set by the Topanga Canyon Floodplain Management Citizen's Advisory Committee. The guidelines presented in this document are a result of three years of community review and discussion. The goal is to learn how best to live with and within our watershed in a sustainable way.

H. Summary Of Education and Restoration Actions Of The Topanga Creek Watershed Committee (May 2002)

Since 1998, the Topanga Creek Watershed Committee has been moving forward in implementing actions identified in the Draft Topanga Creek Watershed Management Plan (April 1996) throughout the watershed. These actions have addressed community education, revision of flood control laws, basic research, and on-going efforts to implement restoration plans. The Topanga Creek Watershed Committee is organized according to a Coordinated Resource Management Plan (CRMP), with all stakeholders sharing in the volunteer, consensus based planning process. Information about the Topanga Creek Watershed Committee is regularly reported in the Topanga *Messenger* and minutes are posted on www.TopangaOnline.com.

Community Education Efforts:

July 1998	First meeting held at Topanga Community House in broiling heat! Yearling steelhead trout found in Topanga Creek.
August 1998	TopangaOnline Website (now receiving 55,000 hits a month) posts Watershed Committee information, Sponsored by Topanga Women's Club, Topanga Town Council.
September 1998	Identifying goals and objectives from Draft Plan continued.
October 1998	Identifying goals and objectives from Draft Plan continued. Identified need to involve the community more and to inform all stakeholders on issues pertaining to water quality, flood control, streambank stabilization, grading and drainage.
December 1998	Topanga Watershed Tour visited six sites in the watershed with presentations from Fred Zepeda, LA Athletic Club, Tony Coles, Caltrans, Dave Yamahara and Albert Anidi, Los Angeles County Dept. of Public Works, Dick Sherman, Topanga Underground, Rabyn Blake, Topanga Floodplain Citizen's Advisory Committee, Susan Nissman, Deputy for Sup. Yaroslavsky. (50 participants).
January 1999	Identifying goals and objectives from Draft Plan continued. Larger community meeting planned.
February 1999	Large stakeholder meeting at Topanga Elementary School presented Draft Plan goals and objectives.
March 1999	Large stakeholder meeting at Topanga Elementary School presented Draft Plan goals and objectives.
April 1999	Workshop on Water Quality Issues with presentations from Shirley Birosic, Regional Water Quality Control Board, Mitzy Taggart, Heal the Bay, Dick Sherman and Paul Tantet regarding septic issues. (130 participants).
May 1999	Workshop on septic systems and graywater systems with demonstrations by Dick Sherman, Steve Braeband and Paul Tantet. (40 participants).
June 1999	Clean the Creek day (50 participants, 2 tons of trash removed) Trout Unlimited sponsors web site.
July 1999	Topanga Stream Team Volunteers training session and beginning of water quality data collection.
September 1999	Training session for Topanga Stream Team Volunteers.

October 1999	Watershed Classes for 4th and 5th graders at Topanga Elementary School (120 students participated). Presented results of environmentally sensitive fuel modification study using data collected by over 70 volunteers at the TCEP festival.
November 1999	Presentation on alternative Fire safety measures and environmentally sensitive fuel modification strategies (120 participants).
December 1999	State of the Watershed meeting (200 participants).
February 2000	Watershed Education Classes held for 4th and 5th grade students at Topanga Elementary School, funded by a gift from Trout Unlimited.
March 2000	Streambank and Slope stabilization Workshop (100 participants).
April 2000	Earth Day Creek Clean Up - (90 participants, over 2 tons removed).
May 2000	Joint Watershed and Firesafe Committee meeting on septic regulations and fire safety.
September 2000	Grading and Drainage Best Management Practices Workshop.
	Airlifted 20 wrecked cars and 17 piles of debris from Topanga Creek in Topanga State Park. Funded by Community volunteer efforts and $13,200 from the Urban Stream Restoration Program.
	Topanga Tomorrow Workshop to begin revision of Draft Topanga Creek Watershed Management Plan recommendations held at The Mermaid.
October 2000	Received award from Southern CA Wetlands Recovery Project for creek car clean up project.
January 2001	Prepared and distributed to all residents handbook called *Living Lightly in the Watershed* to answer commonly asked questions. Include information in the 455 Yellow Pages.
March 2001	Topanga Tomorrow Workshop part 2 met to continue revisions of the Draft Topanga Creek Watershed Management Plan recommendations.
April 2001	Final workshop to complete review of revisions.
	Earth Day Creek Clean Up (50 participants, 5 tons of trash removed).
	Received Watershed Body Restoration Award from the Los Angeles Regional Water Quality Control Board for the creek car project.
May 2001	Septic and Graywater workshop (50 participants) Local contractors, plumbers and septic experts shared their stories and provided practical advice.
	Received Dept of Conservation Grant for Topanga Watershed Coordinator and initiated several education projects with local schools. Initiated a sub-committee on Invasive Plants in response to concerns about use of herbicides in the watershed.
June 2001	Report on preliminary restoration possibilities for Topanga Lagoon and Watershed. Invasive Plant sub-committee met and agreed to hold an educational workshop.
July 2001	Provided update on research projects. TetraTech representative spoke to the Committee about repetitive Flood losses and a LA County program. Completed final review of the revised recommendations for the Management Plan.

September 2001	Meeting to decided on format and approach for revised Management Plan. Invasive Plant sub-committee met to discuss workshop details.
October 2001	State of the Watershed Meeting held with representatives of all stakeholder groups sharing their current efforts. CA Dept. of Parks and Recreation discussed timeline and planning process for Interim Plan for Lower Topanga Park. Local designers and architects Cary Gepner, Oscar McGaw, Jannick , Jade Sadderthwaite and Clark Stevens led an informal design charrette to solicit input from the community concerning the park planning issues.
December 2001	Presentation on results of on-going research projects, including the Topanga Creek Watershed and Lagoon Restoration Feasibility Study.
February 2002	Home Away from Home: Non-Natives in Topanga. Workshop on identifying invasive exotic plants and strategies for removal and control.
April 2002	Earth Day Creek Clean Up and Earth Day education celebration at Topanga State Park.
May 2002	Presentation of the Topanga Creek Watershed Management Plan

Research Projects Completed:

Topanga Stream Walks – with NMFS and NPS to GPS locations of endangered plant and animal species, stands of Arundo, wrecked cars, potential steelhead impediments. Documented presence of yearling steelhead in July 1998, 2-3 adult steelhead in April 2000, clusters of endangered Santa Monica Mountains Dudleya. July 1998, May 1999, April 2000

Biological inventory and GIS overlay of sensitive species adjacent to all County infrastructure in the Topanga Watershed. Contract with LA County Dept. of Public Works – $23,000

Evaluation of Environmentally Sensitive Fuel Modification strategies for the Rural/Urban Wildland Interface – grant from CA Dept. Forestry – $14,500
Included preparation of Firewise Landscaping plant list of Santa Monica Mountain native species.

Fire Behavior changes due to implementation of environmentally sensitive fuel modification strategies – grant from CUEREC – $25,000

Water Quality Monitoring in the Topanga Creek Watershed – grant from 205j $53,800

Topanga Stream Team Volunteers trained and began collecting data.

Monitor Bat populations in Topanga Bridges – contract with LA County DPW $6,000, continued by volunteers

Research historical information about the Topanga Lagoon – $800 from the Topanga Watershed Committee

Volunteer Amphibian survey of Topanga Creek – in partnership with National Park Service

CRMP development Grant – funded by Dept. of Conservation $5,500 to initiate and organize Topanga Watershed Committee

Kitty Killers or Killer Kitties – Role of domestic cats as predators and prey in Topanga – Science Fair Project for 6th and 8th grade students Allison and Cody Wheeland

Water Quality Monitoring took place from July, 1999 until June, 2001 at 15 locations within the watershed, then continues until Dec 2001 at Topanga Lagoon and the Topanga Canyon Blvd. Bridge at mile marker 2.2.

Finalized revisions of the Topanga Creek Watershed Management Plan.

Erosion and Sediment Delivery Study began October 2000, funded by a grant from the Santa Monica Bay Restoration Project $58,000

Topanga Lagoon Restoration Feasibility Study began October 2000, funded by grant from Coastal Conservancy $210,000

On-going Research Projects:

CA Dept. of Fish and Game grant started June 2001 to conduct baseline instream habitat and steelhead trout survey of Topanga Creek.($92,000)

April and September 2001 macro-invertebrate sampling project initiated in cooperation with NPS, Heal the Bay and Caltrans to establish biological assessment index.

Work with Caltrans to implement bioengineered solutions to several riprap slopes along the creek, reduce sedimentation and revise road shoulder maintenance practices to protect roadside pocket wetlands, seeps and other sensitive locations.

Develop prioritized restoration plan for specific sites in the watershed.

Research Projects pending:

Population study of Western Pond Turtles in Topanga Creek – funded by Prop 12

Phase II: Topanga Lagoon and Watershed Restoration Study – Develop specific plans for restoring the streambank at the "Narrows," and working with State Parks to develop a plan for restoring Topanga Lagoon – funded by Prop 12

Whose Poo in Topanga Lagoon? Water Quality Monitoring to identify sources of bacterial contamination/viral presence – submitted to 205j State Water Quality Control Board

Coastal Impact Assistance Program – Los Angeles County Department of Public Works proposal to continue water quality monitoring and hydrological analysis of the Topanga Creek Watershed – Submitted to NOAA

Soil Characterization of Topanga Lagoon Restoration Area – Submitted to Southern CA Wetlands Recovery Program

I. History of Flood Hazard and Flood Hazard Management in Topanga Creek

Contributed by Rabyn Blake, (Draft Topanga Creek Watershed Management Study, 1996)

Throughout this century, heavy rains have come once or twice a decade to Topanga Canyon, with major floods recorded in 1938, 1969 and 1980. Heavy downpours on the heels of prolonged periods of wet weather have done damage to the entire watershed, causing inundation and slides in the uplands with destructive erosive flooding of the creek areas. Accounts in *The Topanga Story* (York, 1992) relate the elemental struggles that occurred during the floods with evacuation, procuring food, attempts to reunite families, and tragically, the death of five people in 1969. The experiences of the residents during these emergencies have prompted concerns for a proactive approach to flood hazard reduction.

During major floods, low-lying areas, including Topanga Center and some houses, have experienced minor inundation flooding. The main damage however, has been to roads, primarily Topanga Canyon Boulevard (State Route 27), an important commuter thoroughfare to the Westside. In 1978 the road was closed for two months for flood repairs. In the "worst flood of the century," February 16, 1980, Topanga Canyon Boulevard was altogether gone in two long stretches of up to 200 yards, and it collapsed in half a dozen other locations, requiring a massive engineering repair job. In 1969, the road repairs lasted from February through the following June. The miracle repair of the boulevard in January 1995, when another section of the Boulevard collapsed, took less than a month thanks to the intervention of our new Supervisor Zev Yaroslavsky and the round the clock performance of Caltrans. The Department of Public Works (DPW) clears and repairs County roads with equal dispatch, and the DPW and the Fire Department have always come to the rescue in times of disaster with sandbags and advice to homeowners

Following the 1980 flood, DPW, under contract to FEMA, mapped the Topanga floodplain to comply with requirements of the National Flood Insurance Program (NFIP) using a 100-year storm. The resulting maps, known as the FIRM maps, are used by the Building Department, insurers, and property owners to identify flood hazard locations. DPW has proposed to change from a flood hazard mitigation system based on the FIRM maps, to one based on its own estimate of the extent of the flood hazard. The new maps, based on DPW calculations, portray a much larger zone of flood hazard than was designated on the FIRM map.

It is clear that the old ways of waiting for disaster to happen and then responding with emergency repair funds cannot continue to serve the community's and the County's needs. In this report, we propose that in the 21st century a new concept, that of watershed management, be employed. It is our intent to not only identify the flood hazard, but to develop measures to reduce it, as well as to maintain the natural resources of the stream channel.

J. Topanga Creek Watershed Committee Stakeholders

Community Representatives

Arson Watch
TASC – Topanga Association for Scenic Community
Topanga Chamber of Commerce
TCTC – Topanga Canyon Town Council
Topanga Canyon Floodplain Citizen's Advisory Committee
Topanga Community Club
T-CEP – Topanga Coalition for Emergency Preparedness
Topanga Citizen's Firesafety Committee
Topanga Historical Society
Hillside/Mesa Homeowners Association
Topanga Skyline Homeowners Association
VOICE – Viewridge Owners Involved in the Community and the Environment
Home Owners Association Viewridge Estates
Bonnell Homeowners Association
Top O Topanga Homeowners Association
Lower Topanga Community
Fernwood Homeowners Association
Topanga Creekside Homeowners Association
Santa Monica Mountains Coalition for Alternatives to Toxics
Topanga Cub Scouts and Girl Scouts
Heal the Bay
Surfrider Foundation
Trout Unlimited

Park and Agency Representatives

CA Department of Parks and Recreation
Santa Monica Mountains Conservancy
National Park Service: Santa Monica Mountains National Recreation Area
Resource Conservation District of the Santa Monica Mountains
National Resources Conservation Service
Los Angeles Regional Water Quality Control Board
CA Dept of Fish and Game
National Marine Fisheries Service
Caltrans
Los Angeles County: Watershed Planning Division, Beaches and Harbors, Building and Safety, Health and Environmental Services Hydrology and Water Resources, Fire, Forestry, Regional Planning, Road Maintenance
Santa Monica Bay Restoration Project
Coastal Conservancy Southern California Wetlands Recovery Project
CA Coastal Commission
Southern California Edison
US Fish and Wildlife
US Army Corps of Engineers

Political Representatives

Zev Yaroslavsky, Third District. LA County Board of Supervisors
Sheila Kuehl, District 23, State Senate
Fran Pavley, District 41, State Assembly
Cindy Miscikowski, District 11, Los Angeles City
Brad Sherman, District 24, U.S. House of Representatives
Henry Waxman, District 29, U.S. House of Representatives

K. ACKNOWLEDGEMENTS

The Topanga Creek Watershed Committee owes a great deal to the pioneering efforts of the members of the Topanga Canyon Floodplain Management Citizens' Advisory Committee, who represented several groups.

- Topanga Association for a Scenic Community (TASC),
- Topanga Canyon Town Council (TCTC),
- Topanga Canyon Creekside Homeowners Association (TCCHA),
- Resource Conservation District (RCDSMM),
- and advisory members representing the County of Los Angeles (LACO).

In particular, it is important to recognize the continuing efforts of Rabyn Blake, whose ceaseless energy and concern for Topanga Creek led to the development of the Draft Topanga Creek Watershed Management Study and the formation of the Topanga Creek Watershed Committee.

Committee members included:
Joan Andersson, J.D., TCCHA
Rabyn Blake, M.F.A., TCCHA
John Crawford, P.E., TASC
Phil Chandler, C.E.G., TASC
Rosi Dagit, Conservation Biologist, RCDSMM
Dick Olsen, TCTC
David Phillips, Ph.D., TCCHA
Carl R. Nelson, P.E., LACO
Irving Sherman, P.E., LACO
Marti Witter, Ph.D., TASC

The Revised Topanga Creek Watershed Management Plan received invaluable input from numerous stakeholders, however the following individuals made an extensive commitment to the process and provided critical input over the years.

Revisions were compiled by Rosi Dagit, Topanga Creek Watershed Coordinator, and the Editorial Sub-Committee including: Dona Christianson, Woody Hastings, Michele Johnson, Julie Rosa, Tricia Watts, Jill Waldron and Marti Witter. Dan Irwin designed and contributed the Topanga Creek Watershed logo, as well as supervised the production of the Watershed Management Plan document. Graphics and images were provided courtesy of the Topanga Historical Society, Randy Young, Terry Steinman, Jill Greene, and Ted Gegoux. Cover photograph provided by Rosi Dagit. Cover design by Dan Irwin.

We apologize if we have forgotten anyone!

TOPANGA CREEK WATERSHED MANAGEMENT PLAN REVIEW COMMITTEE

Topanga Residents:	
Rabyn Blake	Andrew Rasmussen
Bill Buerge	Kevin Reed
Phil Chandler	Victor Richards
John Crawford	Julie Rosa
Dona Christianson	Eli Sercarz
David Gottlieb	Irving Sherman
Woody Hastings	Richard Sherman
Craig Houx	John Simons
Michele Johnson	Bill Sloan
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Scott King	Paul Tantet
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Agency Representatives:
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Suzanne Goode
Glenn Bailey
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Rosi Dagit
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