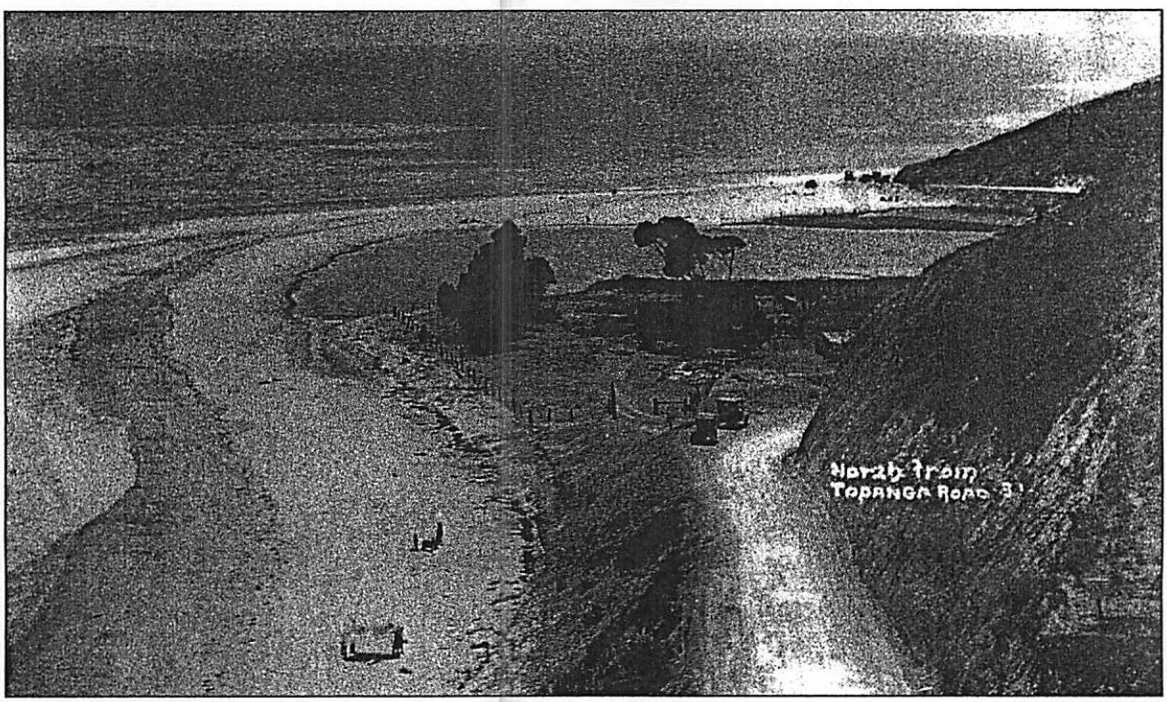
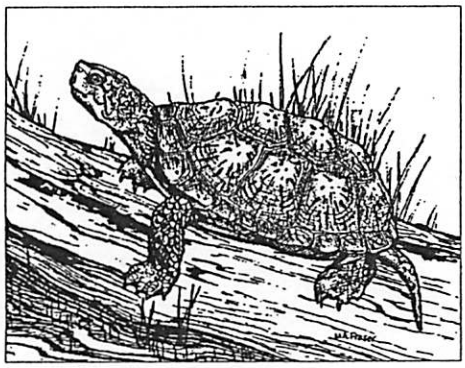
SECTION 6
NATURAL ENVIRONMENT



RANDY YOUNG COLLECTION

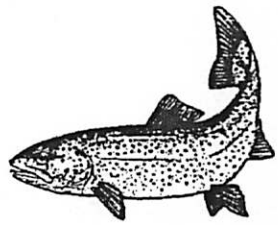


SECTION 6
NATURAL ENVIRONMENT

"There are some who can live without wild things, and some who cannot... Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question of whether a still higher 'standard of living' is worth its cost in things natural, wild and free." – Aldo Leopold

GOALS:

- 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 database (or system) and a mechanism for sharing information gathered by federal, state and local agencies in regards to resource inventory.



Introduction

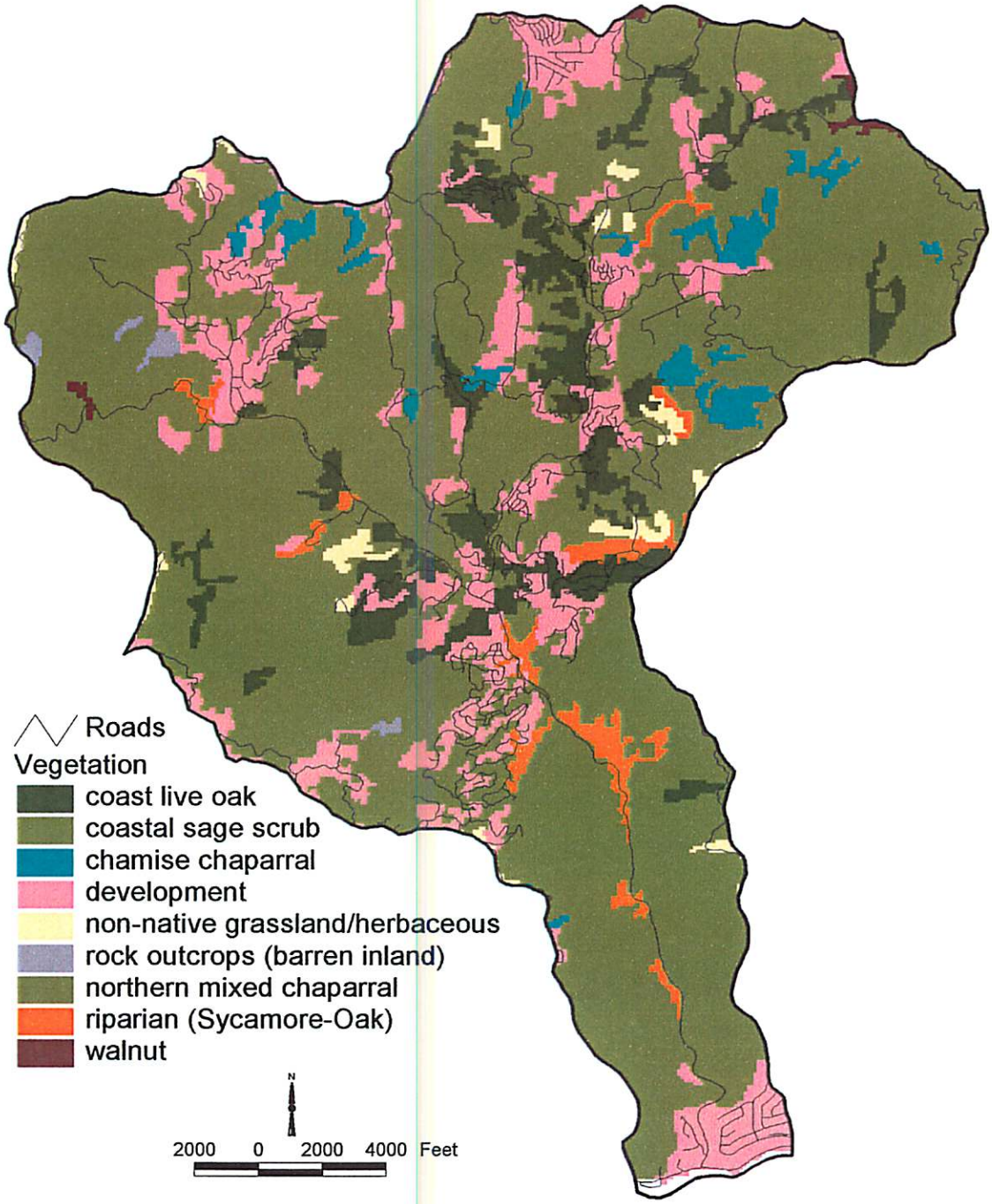
With over two thirds of the Topanga Creek Watershed undeveloped and much of it in public ownership, the natural biodiversity is still impressive. Topanga Creek hosts numerous amphibian and reptile species of special concern, as well as a reproducing population of endangered steelhead trout. Endangered Tidewater gobies swim in Topanga Lagoon. Over 100 species of birds are resident or migrate through the watershed. Large predators like bobcats, badgers and mountain lions roam the hills. Coyotes and fox are frequently seen. We are missing the problematic invasive exotic animals like crayfish, bullfrogs, carp and mosquito fish that can decimate native aquatic populations. The large landholding of Topanga State Park provides core habitat and a critical wildlife movement corridor through the Santa Monica Mountains.

Of the eight plant communities found in Topanga, (using a modified Holland classification system), Southern Coast Live Oak Woodland, Riparian Woodland, and Walnut Woodland, Coastal Sage Scrub and Freshwater marshes are state listed sensitive resources. The complex plant assemblages provides necessary niches for the incredible number of animal species who share the watershed with us. Protecting them from being overwhelmed by invasive exotic plants is a real challenge.

It is the natural condition of the hillsides, canyons and creeks that make Topanga such a wonderful place to live. While pockets of development have caused some fragmentation, much connectivity still exists. Learning to live with the surrounding environment is the cornerstone of sustainable watershed management.

Topanga Watershed

Vegetation



BIOLOGICAL INVENTORY, ASSESSMENT AND MONITORING

ACTIONS:

6.1 Conduct comprehensive survey of flora and fauna, including historic references with the voluntary cooperation of property owners.

6.2 Restore steelhead trout habitat in Topanga.

6.3 Remove barriers to steelhead migration.

6.4 Conduct historic evaluation of creek mouth. Determine former extent of lagoon/wetlands.

6.5 Determine impacts of free ranging cats and dogs on biodiversity.

6.6 Orient outdoor lighting to minimize impacts to wildlife.

(5.4) Acquire, maintain, restore habitat linkages and wildlife corridors. See also Land Use.

(5.5) Protect large blocks of land for core habitat. See also Land Use.

Recommendations which require legal and political changes for implementation:

(5.46) Require that plants and animals be protected during any construction within or adjacent to the stream channel. See also Streambank Protection.

INVASIVE EXOTIC FLORA ERADICATION

ACTIONS:

6.7 Develop a program to eradicate giant cane (*Arundo donax)*, castor bean *(Ricinus communis)*, periwinkle *(Vinca minor)*, tree tobacco *(Nicotania glauca)*, yellow star thistle (*Centurea melitensis*), German ivy *(Senecio mikanioides)*, Algerian ivy *(Hedera sp.)* and Cape ivy *(Delairea ordorata)* without the use of herbicides. Consensus not yet reached on this issue. Instead, a majority vote was taken at the 15 November 2001 meeting.

6.8 Determine impacts of exotic plants and animals on the Creek and entire watershed using existing data, and/or acquire more information as needed.

(4.38) Continue management of road shoulder brush clearance for fire safety and line of sight without the use of herbicides. See also Fire Hazard and Transportation.

Recommendations which require legal and political changes for implementation: None

RIPARIAN VEGETATION PROTECTION

ACTIONS:

6.9 Preserve and enhance the function of the existing riparian vegetation.

6.10 Establish and maintain a revegetation program in order to encourage quick re-establishment of riparian vegetation.

6.11 Create a list of appropriate species for planting under utility wires in order to reduce problems related to tree/utility line interactions.

6.12 Prohibit placement of any materials within the protected zone of a tree, or a minimum of 10 feet from the trunk.

6.13 Tunneling under roots rather than cutting them should be the standard. Any roots exposed during construction should be protected by wet burlap and reburied as soon as possible. Any cuts should be clean and smooth.

6.14 Creation of soil or asphalt berms to direct road runoff should avoid direct contact with tree trunks. See also Transportation.

6.15 In compliance with the Los Angeles County Oak Tree Protection Ordinance, any work done within the protected zone of an oak or any other trees within 50 feet of a stream bank should be done by hand. No stockpiling of dirt or equipment should be permitted within the protected zone of the tree(s).

6.16 Prohibit topping (cutting trees straight across without regard to branch structure).

6.17 Apply directional pruning and crown reduction standards. Use ISA standards for pruning.

6.18 Establish and maintain a *recommended* revegetation program in order to encourage quick re-establishment of riparian vegetation.

6.19 Create a list of appropriate species for planting under utility wires in order to reduce problems related to tree/utility line interactions.

(5.43) Removal of understory vegetation, or burying such vegetation under permanent rip-rap or culverts should be prohibited except under exceptional conditions. See also Streambank Protection.

(5.44) Use of methods encouraging re-establishment of stream vegetation should be preferred over concrete or rip-rap retaining walls. See also Streambank Protection.

Recommendations which require legal and political changes for implementation:

(5.6) The services of a consulting biologist/arborist should be sought prior to and during both the design and implementation phases of all projects. Specified monitoring following completion of construction is also recommended. See also Land Use.

(5.31) Documentation of existing riparian vegetation should be performed prior to any grading activities. See also Grading.

STREAMBANK AND CHANNEL MAINTENANCE

ACTIONS:

(4.5) In accordance with County ordinances, remove any large debris that could create a flood hazard by obstructing the creek channel. This should be coordinated with T-CEP, CA Department of Fish and Game and LA County. See also Flood Hazard.

(4.7) Plan strategic placement of boulders on a stream-wide basis to reduce stream velocity during peak flow, based on hydrologic evaluation and in compliance with accepted Best Management Practices. See also Flood Hazard.

(4.3) Maintain and update annually the list of flood hazards, dumping sites and sites of potential slope failure. Support continued coordination of this effort between T-CEP, LA County and CA Department of Fish and Game. See also Flood Hazard.

(5.20) Design hardscape to preserve and enhance vegetation whenever possible. See also Erosion Control, and Streambank Protection.

(5.40) Limit use of grouted concrete rip rap only to those areas where gabions, bio-engineering efforts, *etc.* are not possible. See also Streambank Protection.

(5.33) Establish Best Management Practices for any work that impacts stream courses and adjoining habitats. Make available to all residents and agencies. See also Streambank Protection and Transportation.

Recommendations which require legal and political changes for implementation:

(4.34) Require analysis with the hydrologic model prior to installation of any streambank hardscape to identify any impacts that could alter channel capacity or stream flow dynamics and to identify potential downstream impacts. See also Flood Hazard and Streambank Protection.

(5.45) Coordinate information with NPDES permits. See also Streambank Protection and Water Quality.

References

DeLisle, H. et al. 1986. The Distribution and Present Status of the Herpetofauna of the Santa Monica Mountains. Southwest Herpetologist Society Special Publication No. 2. Los Angeles, CA

Edelman, Paul. 1990. Critical Wildlife Corridor/Habitat Linkage Areas between the Santa Susanna Mountains, the Simi Hills and the Santa Monica Mountains. Santa Monica Mountains Conservancy, Malibu, CA.

Emmel, Thomas and J.F. Emmel. 1973. The Butterflies of Southern California. Natural History Museum of Los Angeles, CA

Hogue, Charles. 1993. Insects of the Los Angeles Basin. Natural History Museum of Los Angeles, CA

Lieberstein, Terry. 1989. Reserve Design in the Santa Monica Mountains. CA State University Northridge. (Thesis)

McCauley, Milt. 1996. Wildflowers of the Santa Monica Mountains. Canyon Publishing Co., Canoga Park. CA

Mitchell, Martha S. 1998. "Erosion control at the watershed scale: threatened and endangered fish inspire coordination of diverse experts." Erosion Control, March/April 1998, pages 68-78.

Raven, Peter, H. J. Thompson, and B. Prigge. 1986. Flora of the Santa Monica Mountains, California. Southern CA Botanists Special Publication No.2. University of CA, Los Angeles.

Santa Monica Mountains National Recreation Area. 2000. General Management Plan and Environmental Impact Statement.

SUPPLEMENTAL INFORMATION:

Sensitive Plants species found in Topanga thus far include:

Astragalus brawntonii	Braunton's milkvetch
Dudleya cymosa ssp. ovatifolia	Santa Monica Mountains Dudleya
Hemizonia minthornii	Santa Susana Tarplant
Juglans californica	California Walnut

Sensitive Animal Species (state or federally listed, or locally uncommon) documented as of 2001 in Topanga include:

Invertebrates:

Aphonopelmus eutylenum	Tarantula
Zerene eurydice	CA Dogface Butterfly
Danaus plexippus	Monarch Butterfly

Fish:

Oncorhynchus mykiss	Steelhead Trout
Gila orcutti	Arroyo Chub
Eucyclogobius newberryi	Tidewater Goby

Amphibians:

Taricha torosa	CA Newt
Aneides lugubris	Arboreal Salamander

Reptiles:

Clemmys marmorata pallida	Southwestern Pond Turtle
Phrynosoma coronatum blainvillei	San Diego Horned Lizard
Cnemidophorus tigris multiscutatus	Coastal Whiptail
Lampropeltis zonata pulchra	San Diego Mountain Kingsnake
Masticophis flagellum piceus	Red Coachwhip
Salvadora hexalepis virgultea	Coast Patchnose Snake
Thamnophis hammondi hammondi	Two-striped Garter Snake

Birds:

Buteo swainsoni	Swainson's Hawk
Circus cyaneus	Northern Harrier
Accipiter striatus	Sharp-shinned Hawk
Accipiter cooperii	Cooper's Hawk
Elanus caeruleus	Black Shouldered Kite
Buteo lineatus	Red shouldered Hawk
Empidonax traillii	Willow Flycatcher
Lanis ludovicianus	Loggerhead Shrike
Dendroica petechia	Yellow Warbler
Icteria virens	Yellow breasted Chat
Nycticorax nycticorax	Black Crowned Night Heron
Sialia mexicana	Western Bluebird

Mammals:

Antrozous pallidus	Pallid Bat
Eumops perotis	Western Mastiff Bat
Bassariscus astutus	Ringtail Cat
Felis concolor	Mountain Lion
Felis rufus	Bobcat
Taxidea taxus	American Badger

Other sensitive species that are potentially present in Topanga but not currently documented include:

Invertebrates:

Neduba longipennis	Santa Monica Sheildback Katydid
Trimerotropis occidentaloide	Santa Monica Mountain Grasshopper
Satyrium auretorum fumosoum	Santa Monica Mts. Hairstreak Butterfly

Amphibians:

Bufo microscaphus californicus	Arroyo Toad
Rana aurora draytonii	CA Red-legged Frog

Major Plant Communities found in the Topanga Creek Watershed
*Data based on 1998 Vegetation overlay from NPS

Plant Community	Approximate Number Acres	State Status
Coast Live Oak Woodland	900	
Riparian Woodland	318	Threatened
Walnut Woodland	10	Very Threatened
Coastal Sage Scrub	1700	
Northern Mixed Chaparral	7600	
Chamise Chaparral	300	
Non-native grasslands	169	
Coastal Strand	20	Threatened

Numbers of Animal Species found in the Topanga Creek Watershed
*Numbers based on data collated and collected by the RCDSMM

Insects – over 600 species reported
Arthropods – 50 species
Fish – 3 species
Amphibians – 7 species
Reptiles – 15 species
Birds – over 111 species noted, 35 species of confirmed breeders
Mammals – over 50 species (including at least 4 bat species)