



Community Stewardship for Clean Water Workshop

Grazing & Erosion Management and



Conservation Easements

*November 14, 2007
Livermore City Council Chambers*



Workshop Pre-Survey





Welcome

- Thank you for attending today's workshop!
- Today's speakers
 - Rod Tripp, EBMUD
 - Joe Ciolek, PLCS
- Workshop Organizers
 - South Bay Aqueduct Watershed Workgroup
- Financial Support
 - Proposition 13 Non-point Source Pollution Control Grant from the State Water Resources Control Board for the CALFED Bay-Delta Program



East Bay
Regional Park District



CALFED
BAY-DELTA
PROGRAM



ACWD
ALAMEDA COUNTY WATER DISTRICT

UC
CE
University of
California
Cooperative Extension



Santa Clara Valley
Water District



Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARD



Harvey O. Banks Pumping Plant

Campbell



Bethany Reservoir



Lake Del Valle, Livermore



ACWD Water Treatment Plant No. 2

ALAMEDA CREEK WATERSHED

Northern
Eastern

The Alameda Creek Watershed covers over 1,000 square miles extending from Mt. Diablo in the north to the San Francisco Bay Area in the south. The watershed is divided into numerous sub-watersheds and sub-watersheds.

EMBEDDED WATERS

The Alameda Creek Watershed is composed of numerous sub-watersheds. The Alameda Creek Watershed is composed of numerous sub-watersheds. The Alameda Creek Watershed is composed of numerous sub-watersheds.



Water and land resources are essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.

WATER QUALITY AND PROTECTION

Water quality is essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.



WATER INFRASTRUCTURE

Water infrastructure is essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.



WATER RESOURCES

Water resources are essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.



WATER QUALITY IMPROVEMENT

Water quality improvement is essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.



WATER USE

Water use is essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.

WATER CONSERVATION

Water conservation is essential for the health and well-being of the community. The Alameda Creek Watershed is a vital part of the region's water supply.



Livermore

Lake Del Valle

Del Valle Watershed



Grazing & Erosion Management and Conservation Easements

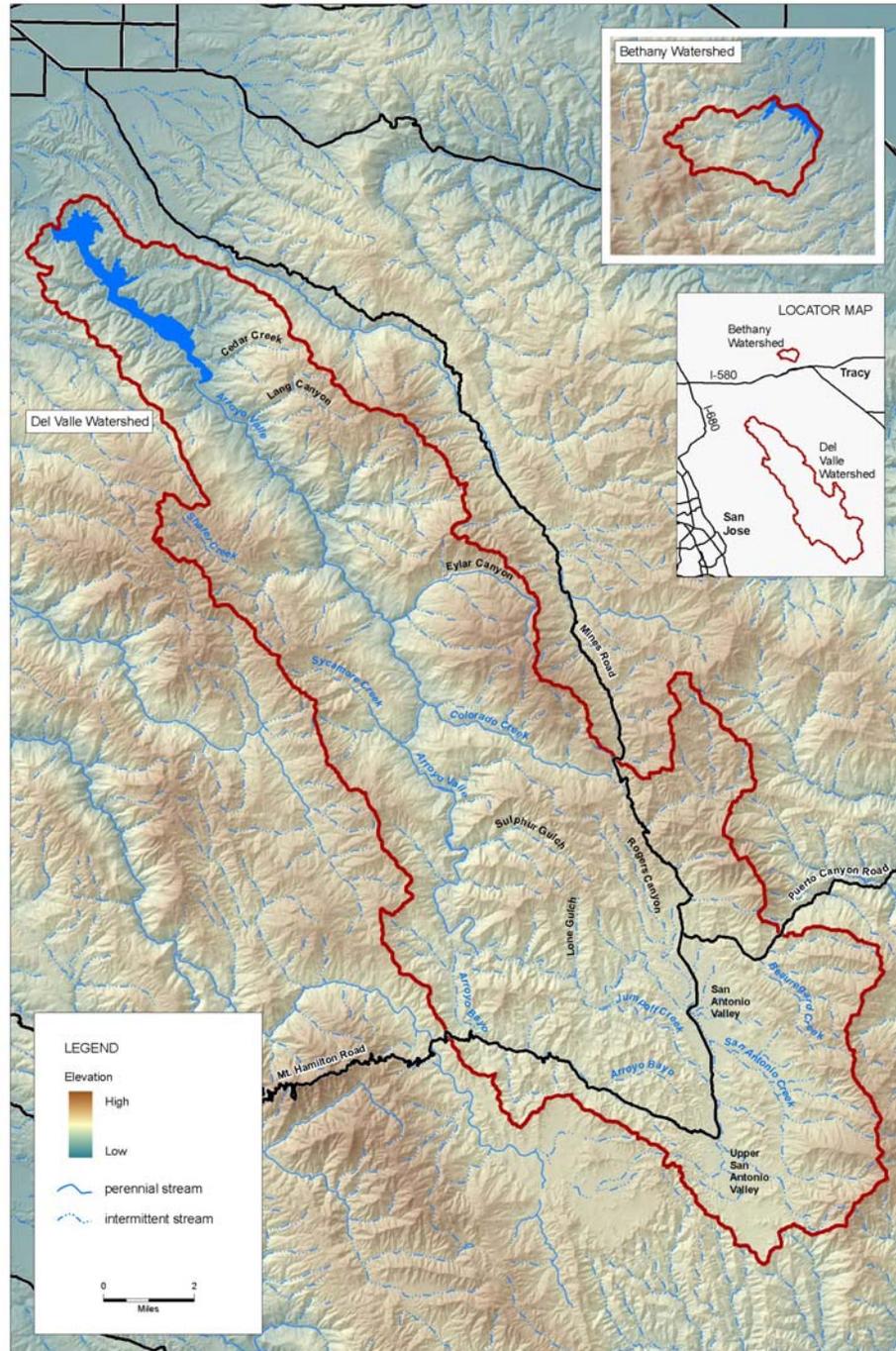
➤ Using the tools we learn about today will protect local waterways and benefit:

- Recreation
- Environment
- Agriculture
- Water Quality
- Drinking Water



Lake Del Valle, Livermore



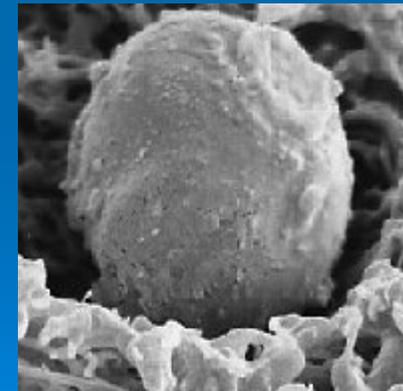
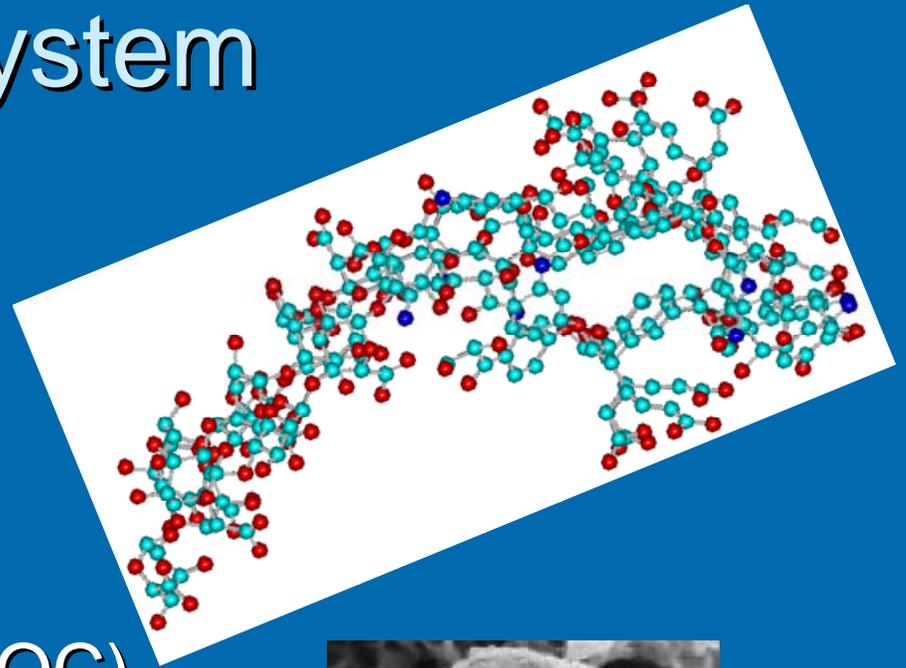


SOURCES: Topography: National Elevation Dataset, USGS, 2005
 Hydrography: California Spatial Information Library, 2005

SBA Watershed Protection Program Plan - 205076
Figure 3-6
 Streams and Watersheds

Contaminants of Concern in the SBA System

- Bacteria: *E. coli*, Total coliform, Fecal coliform
- Protozoa: *Giardia*, *Cryptosporidium*
- Bromide
- Total Organic Carbon (TOC)
- Total Solids (Dissolved & Suspended)
- Nutrients: Nitrate, Nitrite & Phosphorous





Community Stewardship for Clean Water Workshop

Fire Prevention
and
Water Pollution
Prevention



TODAY! 10:30 a.m. –
12 p.m.

Community Room A

Grazing and Erosion Control Practices

**Rodney Tripp
Ranger Supervisor**

**East Bay Municipal Utility District
Orinda, California**

November 14, 2007

TOPICS TO BE COVERED

I. Roads and Culverts

II. Erosion and Creek Restoration

III. Livestock Grazing

WATER QUALITY CHECKLIST

💧 Water Quality Parameters of Concern

- 1) Physical - Turbidity, & Suspended Sediment
- 2) Microorganisms - Bacteria & Pathogens
- 3) Chemical - Total Organic Carbon, Nitrates, Phosphates

I. ROADS AND CULVERTS

A) WATER QUALITY CHECKLIST

💧 Physical - Turbidity, & Suspended Sediment

Microorganisms - Bacteria & Pathogens

Chemical - Total Organic Carbon, Nitrates,
Phosphates

I. ROADS AND CULVERTS

B) GRADING ROADS

- 💧 Play the Water Management Game
- 💧 Soil and Slope Dependent
- 💧 No Such Thing as “To Much.....”

















II. EROSION CONTROL AND CREEK STABILIZATION

A) WATER QUALITY CHECKLIST

- Physical - Turbidity, & Suspended Sediment
- Microorganisms - Bacteria & Pathogens
- Chemical - Total Organic Carbon, Nitrates, Phosphates

II. EROSION CONTROL AND CREEK STABILIZATION

B. PLANNING

- 1) Goals, Inventory, Priorities Determined, ID Projects.
- 2) What's caused the problem and how do I fix it?
- 3) Project Implementation and Follow-up.

























III. LIVESTOCK GRAZING AND WATER QUALITY

- A) WATER QUALITY CHECKLIST
- B) MANAGEMENT GOALS FOR WATER QUALITY
- C) CRYPTOSPORIDIUM AND GIARDIA ISSUES
- D) CHEMICAL - NUTRIENTS
- E) SITE CONSERVATION THRESHOLDS
- F) FIRE AND FUEL MANAGEMENT
- G) FACILITIES
- H) ALLOTMENT MANAGEMENT PLANS

III. LIVESTOCK GRAZING AND WATER QUALITY

A) WATER QUALITY CHECKLIST

- Physical - Turbidity, & Suspended Sediment
- Microorganisms - Bacteria & Pathogens
- Chemical - Total Organic Carbon, Nitrates, Phosphates

III. LIVESTOCK GRAZING AND WATER QUALITY

B) Possible Management Goals for Water Quality

- 1. Municipal Water Supply**
- 2. Fisheries and Wildlife**
- 3. Agricultural Use**

III. LIVESTOCK GRAZING AND WATER QUALITY

C) Cryptosporidium and Giardia Issues (pathogens)

- 1) Calving Season - Fall vs. Spring/Summer
- 2) Season of Use - Winter vs. Summer
Grazing
- 3) Mortality with Desiccation

South Watershed Grazing Allotments

Total AUM's = 3325

LEGEND

Hydrologic Watershed Basin

San Leandro

Chabot

Allotments

Brown Ranch

Carr

Mendonca

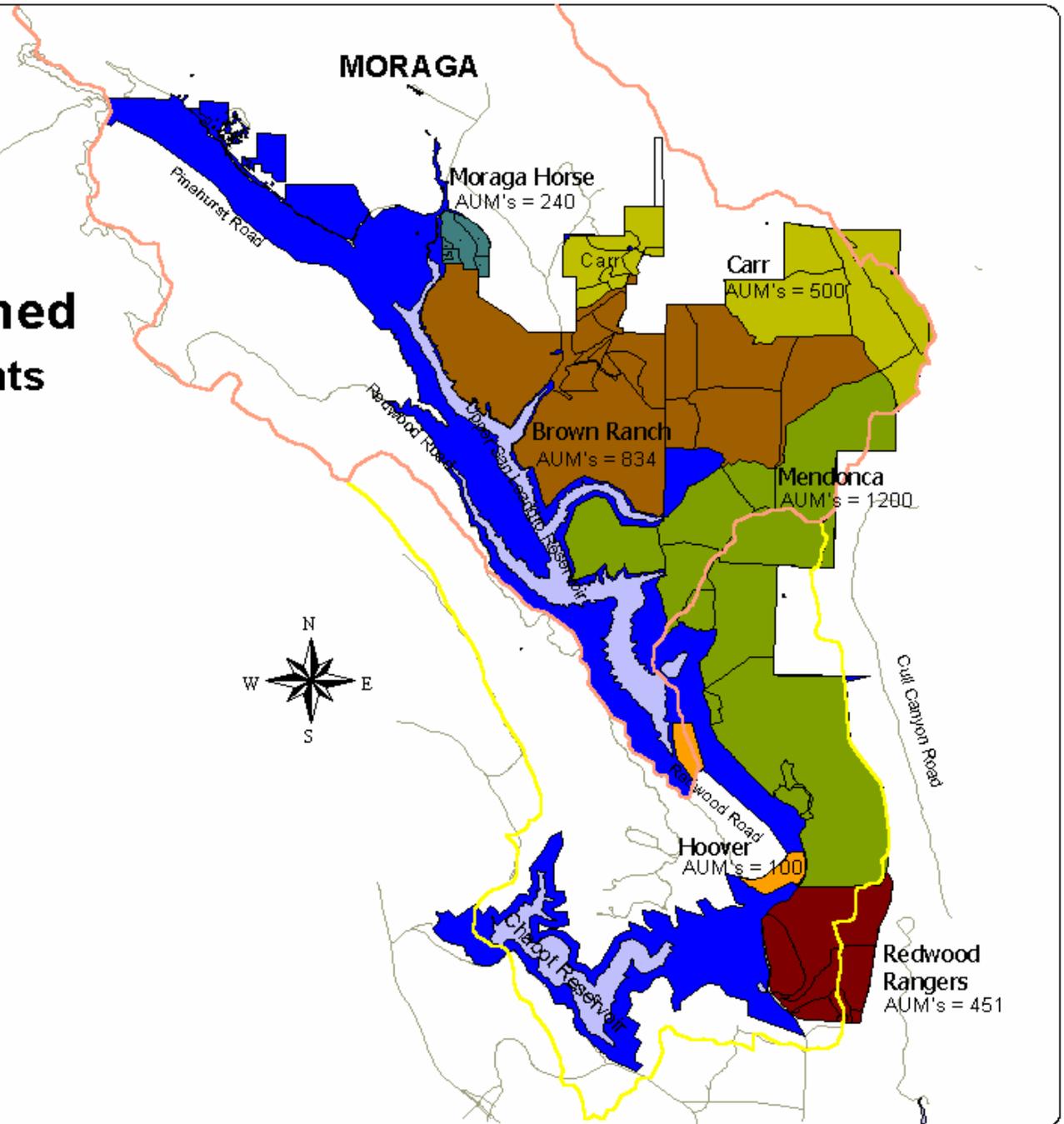
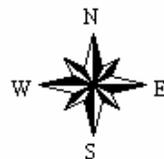
Hoover

Moraga Horse

Redwood Rangers

Ungrazed

Paved roads



III. LIVESTOCK GRAZING AND WATER QUALITY

D) Chemical - Nutrients

1) Nitrogen originating from animal excreta.

- Animal Waste Deposited into Open Water Problematic
- Promotes algae growth, eutrophication, and undesirable water flavor and odor.
- Very Little Movement in Uplands of Fecal Contamination

2) Buffer Zones - Fenced Water Bodies and Riparian Areas



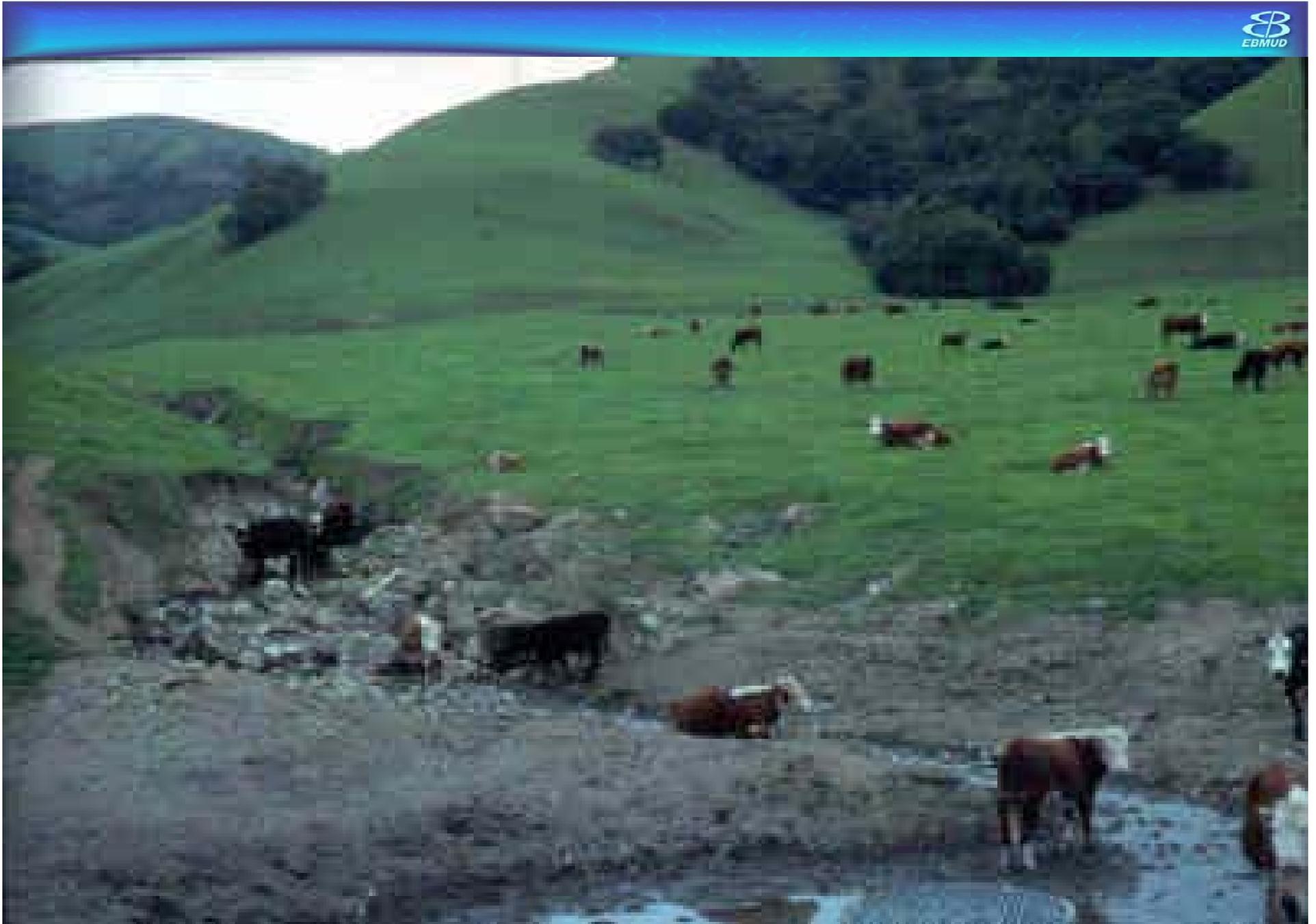
















III. LIVESTOCK GRAZING AND WATER QUALITY

E) Site Conservation Thresholds (erosion protection)

1) Minimum vegetative cover 65% - 75%

2) RDM – Residual Dry Matter Levels

Gentle Slopes – 900 lbs/acre

Moderate Slopes – 1,200 lbs/acre

Steep Slopes – 1,400 lbs/acre



SATHER
10-27-95



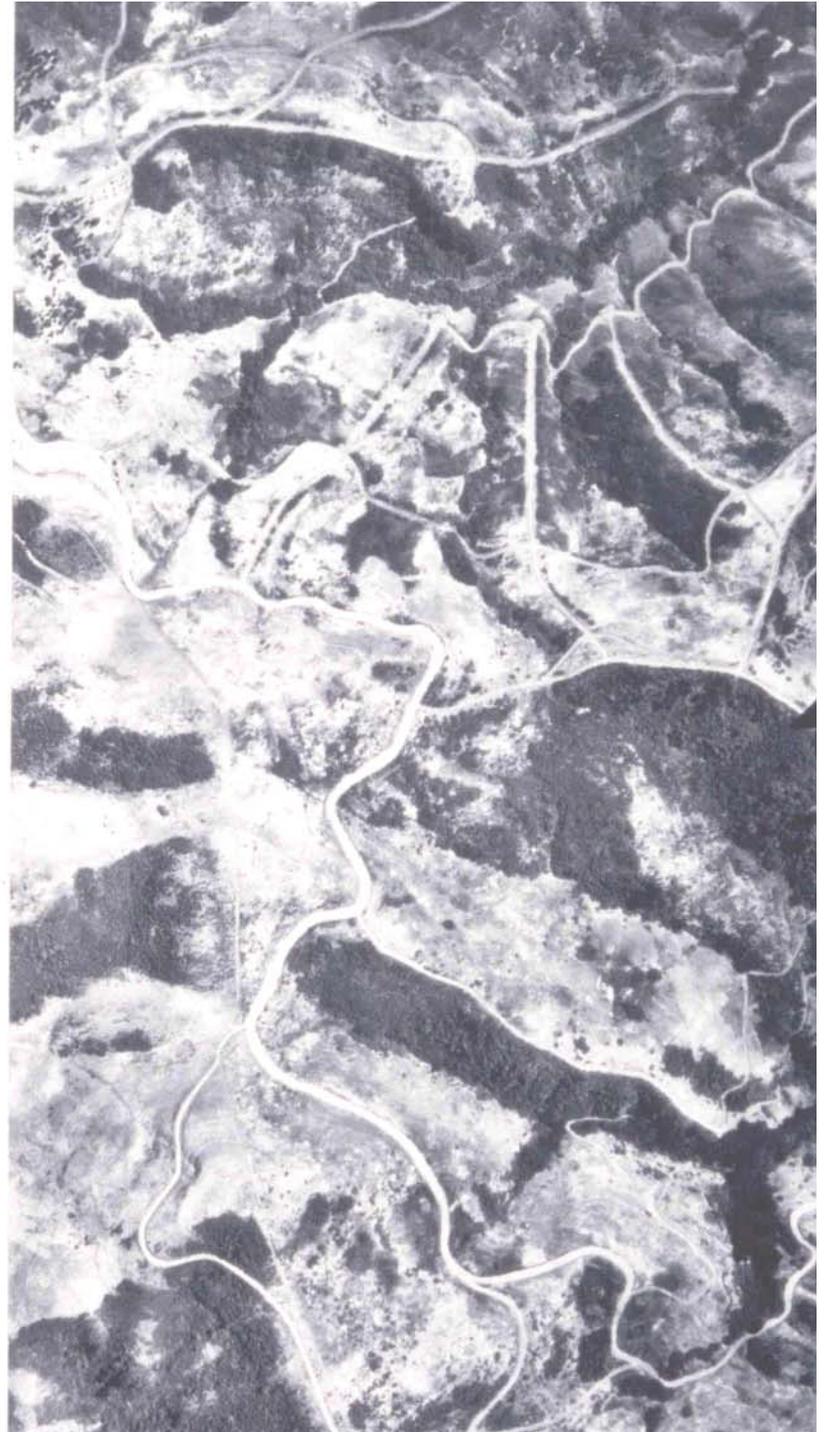
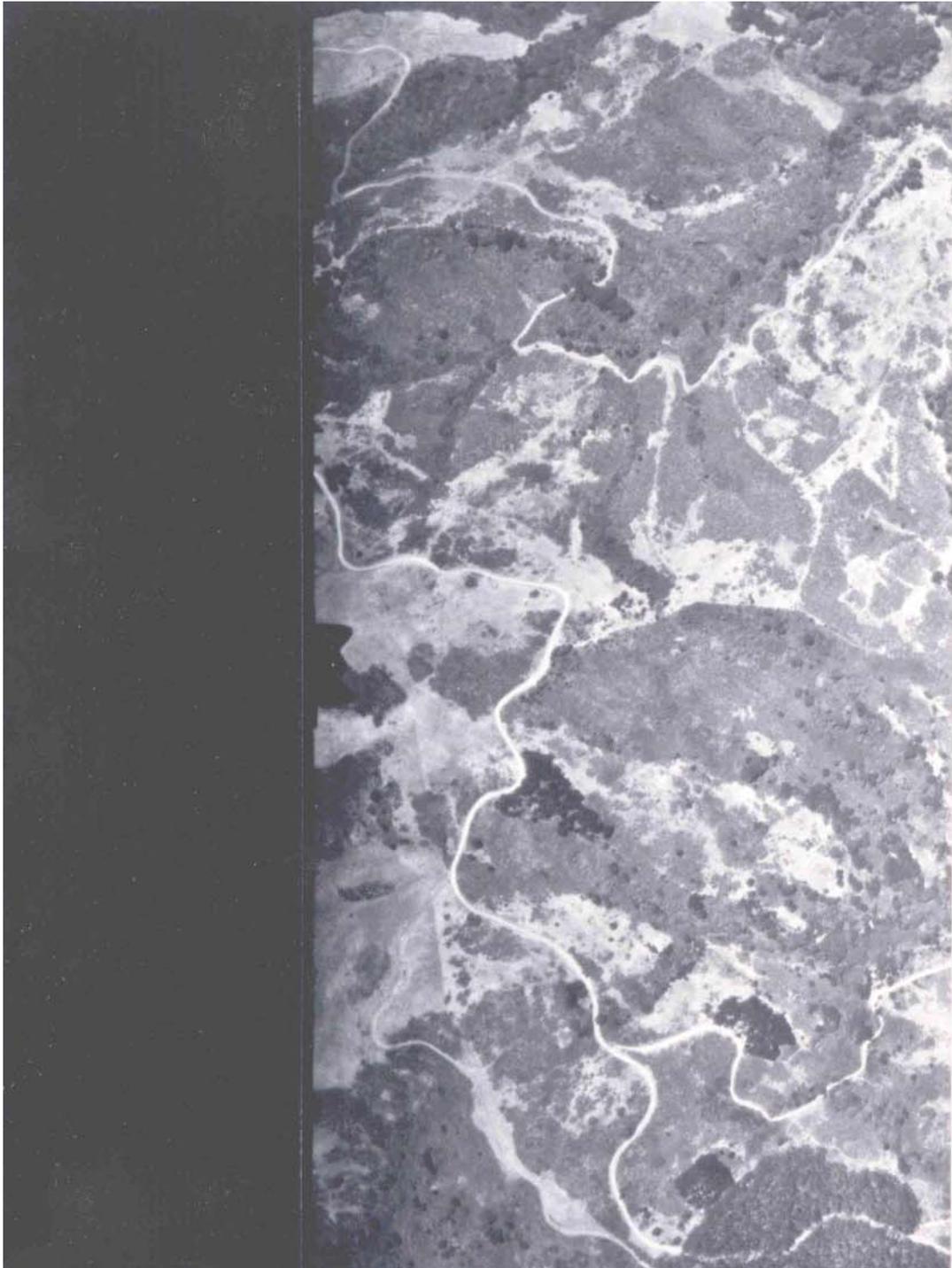
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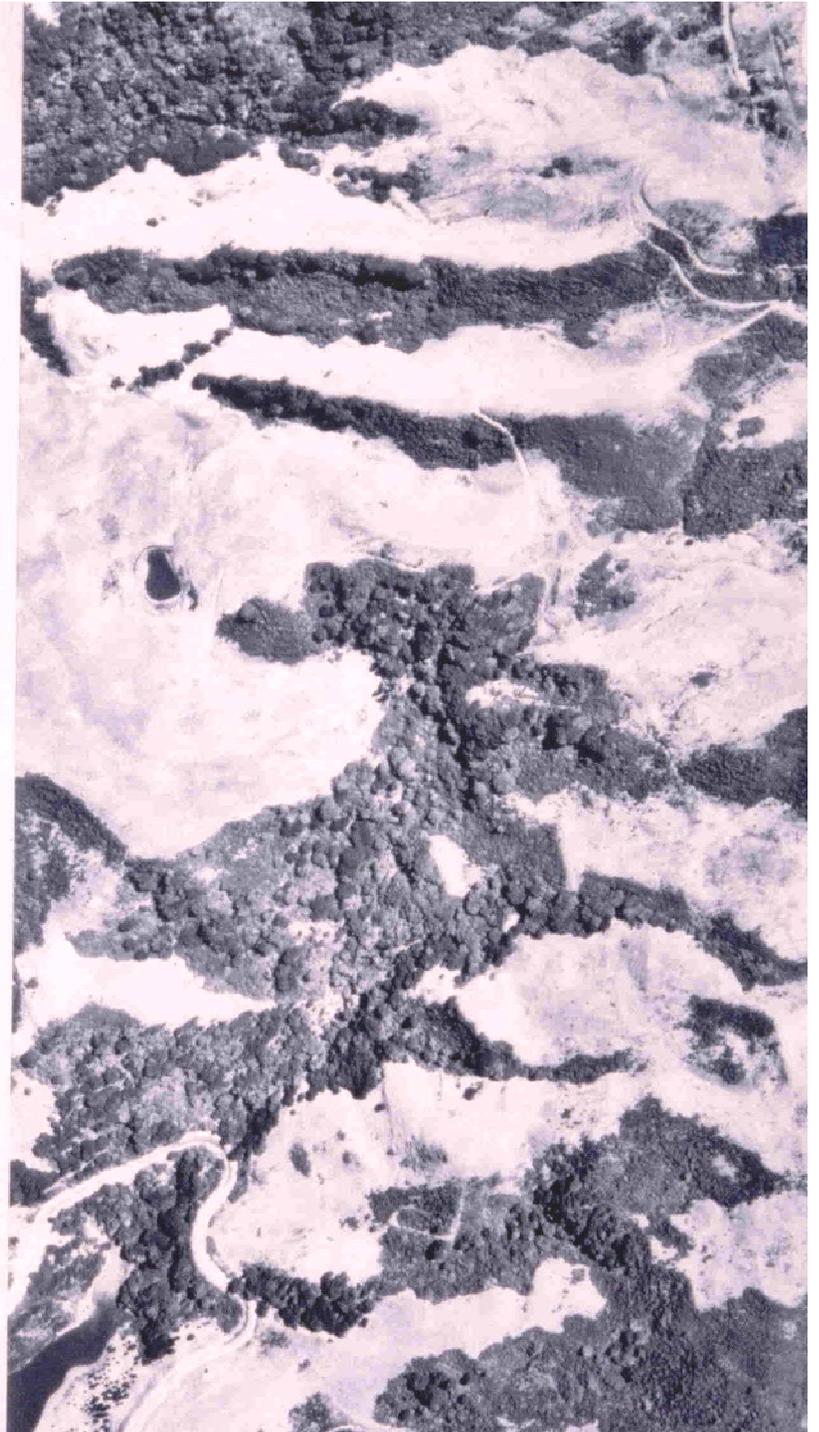
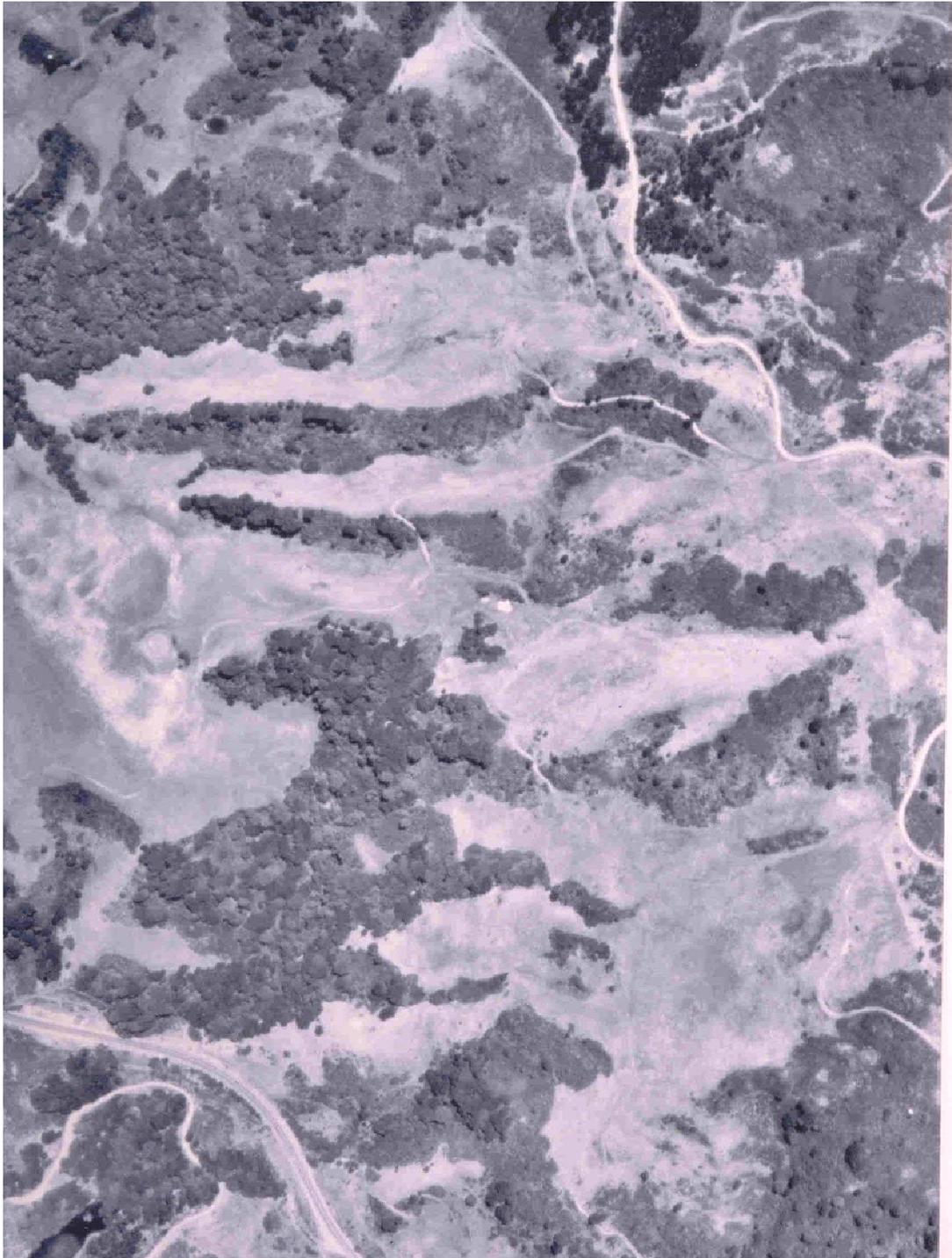
F) Fire and Fuels Management

1) Reduce Fine Fuels

2) Maintain Existing Vegetation Mosaic

3) Manage Urban Interface Fire Threat





III. LIVESTOCK GRAZING AND WATER QUALITY

F) Facilities

- 1) Corrals and Location- 100 yards from creek or open water.

- 2) Ponds - difficult to build, maintain and manage
 - Spillway cutting or aggrading
 - Dam Slumping
 - Head cutting







III. LIVESTOCK GRAZING AND WATER QUALITY

G) Allotment Management Plans Describe Planning Approach

- 1) Holistic Resource Management - Process, vision, restrictions, improvements**
- 2) Annual Grazing Plan & The Five Year Improvement Plan**
- 3) Monitoring - Is it working? Water Quality, Biodiversity, and RDM**









IV. Summary

- I. Roads and Culverts
- II. Erosion and Creek Restoration
- III. Livestock Grazing

IV. Summary

💧 Water Quality Parameters of Concern

- 1) Physical - Turbidity, & Suspended Sediment
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**ALAMEDA COUNTY
PARTNERSHIP for LAND CONSERVATION & STEWARDSHIP
PROCESS for ESTABLISHING A CONSERVATION EASEMENT**

**Discussion at the Community Stewardship for Clean Water Workshop
November 14, 2007**

There are many different types of conservation easements and many different approaches to putting a conservation easement in place. This discussion covers the approach used by the Alameda County Partnership for Land Conservation & Stewardship ("PLCS").

PROJECT NAME:

- **Confidentiality** is essential – referenced as a “project”, rather than a “property” until Landowner authorizes disclosure

PROJECT DESCRIPTION & LOCATION:

- **Confidentiality** is again essential, until Landowner authorizes disclosure

PARTIES INVOLVED & CONTACT INFORMATION (internal information):

LANDOWNER(S)

CONSERVATION ENTITY

FUNDING SOURCE(S)

- Mitigation transactions involve a Mitigating Entity

RESOURCE AGENCIES (if involved)

LOCAL GOVERNMENT (if involved)

OTHERS (if involved)

DATE of INITIATION: _____ **ANTICIPATED DATE of COMPLETION:** _____

PURPOSE of PROJECT:

PURPOSE & STRATEGY of LANDOWNER(S)

PURPOSE & STRATEGY of PLCS

PURPOSE & STRATEGY of OTHERS INVOLVED (if any)

e.g. – Alameda County Conservation Partnership (ACRCD & NRCS)

EXAMPLES or MODELS USED for GUIDANCE:

OTHER FACTORS UNIQUE or SPECIFIC to THIS CONSERVATION OPPORTUNITY:

THE PROCESS -- Refined cooperatively with Landowner as the Project unfolds

- I. Indication of Interest
- II. Preliminary Site-specific Understanding
 - Agricultural Conservation
 - Habitat Conservation
 - Wetland & Riparian Conservation
 - Forest & Woodlands Conservation
 - Open Space Conservation
 - Mitigation Transaction (requires further discussion and agreement on the role PLCS will play in the process)
- III. Memorandum of Understanding & Confidentiality Agreement
 - Initiate discussion on Stewardship & Stewardship Fund
- IV. Initial NRCS Site Visit (to determine Conservation Values)
- V. Resource Management Plan (to recommend methods for enhancing the identified Conservation Values)
- VI. Draft Conservation Easement
 - Conservation Values
 - Purpose
 - Grantee's Rights
 - Reserved (Grantor's) Rights
 - Prohibited Uses
 - Permitted Uses
 - Grantee's Duties
 - Grantor's Duties
 - Transfer of Easement
 - Transfer of Property
 - Amendment
- VII. Initial Due Diligence
- VIII. Preliminary Title Report
- IX. Discuss Land Use Considerations (if applicable)
 - Considerations from any applicable Specific Plan

PLCS PROCESS for ESTABLISHING A CONSERVATION EASEMENT
PAGE 3

- X. Landowner's Conservation Strategy & Land Management Plan
- XI. Draft Agreement for Sale & Purchase of Conservation Easement (typical, but not always required)
- XII. Legal Review (both Parties and the primary Funding Source, when 3rd Party funding is used)
- XIII. Final Conservation Easement
- XIV. Independent Appraisal
 - By licensed Appraiser acceptable to expected Funding Sources
 - Typically by mutual agreement, or two separate appraisals
- XV. Third Party Agreement(s) (if applicable)
 - Preliminary commitment from Funding Source(s)
 - Local Government involvement and agreement (if applicable)
 - Finalize on Land Use considerations (if applicable)
 - Agency involvement and agreement (if applicable)
 - Others involvement and agreement (if applicable)
- XVI. Review of Tax and Accounting Considerations (always the Landowner's responsibility)
- XVII. Agreement on Price
- XVIII. Agreement on Stewardship Fund
- XIX. Agreement on Communications Program (if applicable)
 - Updated Inventory – focus on history and awareness (publicity)
 - Historical Society (if applicable)
 - Announcements
 - Signage
 - Other communications aspects (if any)
- XX. Final Due Diligence
 - Specifically including final Hazardous Materials Review
- XXI. Final Legal Review
 - Confirmation re: "pending or threatened litigation, administrative proceeding, or other or governmental action"
- XXII. Baseline Report
- XXIII. Funding
- XXIV. Closing
- XXV. Announcement & Communication

Typical Program Timeline:

<u>From Agreement to Proceed:</u>	<u>Progressive Timeline:</u>
○ Memorandum of Understanding	30 - 60 days = 1 to 2 months
○ Agreement for Sale & Easement	90 - 120 days = 3 to 4 months
○ Legal Reviews	120 - 180 days = 4 to 6 months
○ Agreement on Price	150 - 210 days = 5 to 7 months
○ Funding	240 - 390 days = 8 to 13 months
○ Closing	270 - 540 days = 9 to 18 months

Without collaboration between and time commitment from all involved Parties, the process will take longer than expected!

Example of PLCS Funding Considerations (specific to Alameda County Landowners):

- Internal funds of the Conservation Entity are almost always leveraged with grant funds from a 3rd Party Funding Source
- Initial Grant application strategy is based upon:
 - Altamont Landfill Grant Fund Program
 - Alameda County Conservation Partnership Programs
 - State Funding Programs
 - Federal Funding Programs
 - Private Funding Programs
- Initial feedback from State/Federal Agencies
- Possible cooperation from other (private) Conservation Funding Entities
- Third Party involvement, if applicable
- Invite City/County involvement
- Cooperation from other governmental entities, if applicable
- Cooperation with other Land Trusts
- **Mitigation transactions have different funding considerations**